October 1974 Number 362-Part I

Solar-Geophysical Data prompt reports

Data for September 1974–August 1974

noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / ENVIRONMENTAL DATA SERVICE / ASHEVILLE, N.C.

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Solar - Geophysical Data

NO. 362 OCTOBER 1974

Part I (Prompt Reports)

DATA FOR
SEPTEMBER 1974
AUGUST 1974

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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SOLAR - GEOPHYSICAL DATA

No. 362

Issued in two parts

Hope I. Leighton, Editor

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ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SEPTEMBER 1974

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS).

Boulder 10/2155Z Soflare X-2 N08E57 10/2145Z in progress. Tenflare 3300 FU 10/2145Z in progress.

Boulder 13/1535Z Tenflare 400 FU 13/1505Z in progress, possible Proton Flare.

Boulder 15/1412Z Magstorm begins 15/1342Z Sudden Commencement.

Boulder 19/0120Z Magstorm begins 19/0045Z Sudden Commencement observed 30 Gamma

Boulder 19/2243Z Soflare 3N N10W64 19/2230 in progress. Tenflare 2270 Flux Units 19/2240Z in progress. Proton Event likely.

Boulder 22/2347Z Tenflare 666 Flux Units 22/2342Z, no Optical Flare

Boulder 26/0212Z Minor Magnetic Disturbance in progress. Boulder K-Indices equal 5 for periods 25/21-24Z and 26/00-03Z.

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10cm solar flux	A index	Active Regions: Location Lat-Long	No. of Flares: Total	M	X	Outstanding events	Forecasts: Date	Location Lat-Long	Desc*	Alert Situations
244	01	31	022	074	12	N01W88	0	0	0	MINOR GEOMAGNETIC	01	N01W88	Q	SOLQUIET
						S09E75	0	0	0	DISTURBANCE CONTINUES		S09E75	Q	MAGALERT 01/05 MINOR
245	02	01	011	076	15	S07E61	0	0	0	MINOR GEOMAGNETIC DISTURBANCE CONTINUES	02	S07E61	Q	SOLQUIET MAGALERT 02/05 MINOR
246	03	02	011	078	21	S08E48	0	0	0	MINOR GEOMAGNETIC DISTURBANCE CONTINUES	03	S08E48	Q	SOLQUIET MAGALERT 03/05 MINOR
247	04	03	024	078	13	S07E34	0	0	0	MINOR GEOMAGNETIC	04	ALL		SOLQUIET
						S03E69	0	0	0	DISTURBANCE CONTINUES		GROUPS	Q	MAGALERT 04/05 MINOR
248	05	04	080	080	15	S08E21	0	0	0	MINOR GEOMAGNETIC	05	ALL		SOLQUIET
						S03E55	0	0	0	DISTURBANCE SUB-		GROUPS	Q	MAGNIL
						S12W06	0	0	0	SIDING				
						N07E24	0	0	0					
						S14E64	0	0	0					
						S13E36	0	0	0					
249	06	05	080	080	15	S07E06	0	0	0		06	ALL		SOLQUIET
						S03E41	0	0	0			GROUPS	Q	MAGQUIET
						S12W18	0	0	0					
						N07E12	1	0	0					
						S14E49	1	0	0					
						S13W22	0	0	0					
250	07	06	100	081	13	S07W05	0	0	0		07	ALL		SOLQUIET
						S03E29	0	0	0			GROUPS	Q	MAGQUIET
						S12W32	0	0	0					
						N08E01	1	0	0					
						S14E36	0	0	0					
						S13E09	0	0	0					
						S19E02	0	0	0					
251	08	07	061	084	11	S07W18	0	0	0		08	ALL		SOLQUIET
						S03E15	0	0	0			GROUPS	Q	MAGQUIET
						N08W11	0	0	0					
						S14E22	6	0	0					
						S13W05	0	0	0					
252	09	08	033	092	08	S07W32	0	0	0		09	ALL		SOLQUIET
						S02E03	0	0	0			GROUPS	Q	MAGQUIET
						S13E10	0	0	0					
253	10	09	099	095	06	S07W44	0	0	0		10	S07W44	Q	SOLALERT 10/15
						S03W10	0	0	0			S03W10	Q	MAGQUIET
						N08W40	1	0	0			N08W40	Q	
						N07E72	3	0	0			N07E72	E	
						S12E73	0	0	0			S12E73	Q	
						S20E00	0	0	0			S20E00	Q	
254	11	10	136	101	07	S07W57	0	0	0	2B FLARE AT	11	N08E56	P	MAJOR FLARE ALERT 11/16 N08E56
						S03W22	0	0	0	10/2130Z, X5		S12E58	C	MAGQUIET
						N07W54	2	0	0	X-RAY EVENT.		O.G.	Q	
						N08E56	5	0	1	5500 FLUX UNITS				
						S12E58	0	0	0	AT 10 CM				
						S19W12	0	0	0					
						S16E69	0	0	0					
255	12	11	094	103	05	S08W72	0	0	0		12	B98E43	P	MAJOR FLARE ALERT 12/16 N09E43
						S03W38	0	0	0			S10E42	C	MAGQUIET
						N06W70	2	0	0			O.G.	Q	
						N09E43	3	0	0					
						S10E42	2	0	0					
						S15E53	0	0	0					
256	13	12	103	104	05	S08W88	0	0	0		13	N08E27	P	MAJOR FLARE ALERT 13/16 N08E27
						S03W52	3	0	0			O.G.	Q	MAGQUIET
						N09W85	0	0	0					
						N08E27	5	0	0					
						S13E28	1	0	0					
						S16E40	0	0	0					

* Q=Quiet E=Eruptive A=Active P=Proton C=Caution D=Doubtful O.G.=Other Groups

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SEPTEMBER 1974

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10cm solar flux	A index	Active Regions: Location Lat-Long	Flares: Total	Flares: M	Flares: X	Outstanding events	Forecasts: Date	Forecasts: Location Lat-Long	Forecasts: Desc*	Alert Situations
257	14	13	077	106	12	S04W63	0	0	0	2B FLARE AT	14	S04W63	Q	MAJOR FLARE ALERT 14/16
						N09E16	2	0	0	13/1510Z, S13E26		N09E16	A	MAGALERT 14/17
						S10E15	3	1	0	A TENFLARE		S10E15	E	
						S14E28	0	0	0					
258	15	14	147	103	08	S03W75	1	0	0		15	S03W75	Q	SOLALERT 15/18
						N08E02	10	0	0			N08E02	A	MAGALERT 15/17
						S10E02	0	0	0			S10E02	Q	PROTON FLARE NIL
						S15E14	0	0	0			S15E14	Q	
259	16	15	106	102	35	N07W10	6	0	0	GEOMAGNETIC STORM	16	N07W10	E	SOLALERT 16/20
						S12W10	0	0	0	STARTED WITH SC		S12W10	Q	MAGALERT 16/20
						S16E03	0	0	0	15/1344Z		S16E03	Q	
						N10E73	0	0	0			N10E73	Q	
260	17	16	074	098	54	N07W20	7	0	0		17	N07W20	E	SOLALERT 17/20
						S11W26	4	0	0			S11W26	Q	MAGALERT 17/20
						S17W10	0	0	0			S17W10	Q	
						N07E59	0	0	0			N07E59	Q	
261	18	17	119	099	05	N09W36	12	0	0	GEOMAGNETIC STORM	18	N09W36	E	SOLALERT 18/20
						S10W38	3	0	0	ENDS 16/2200Z		O.G.	Q	MAGALERT MINOR 18/20
						S16W23	0	0	0					
						N09E46	0	0	0					
						S12W52	0	0	0					
262	19	18	102	102	10	N10W48	11	2	0	POSSIBLE 2N FLARE	19	N10W48	A	SOLALERT 19/20
						S10W54	1	0	0	AT 18/1036Z FROM		O.G.	Q	MAGALERT 19/20
						S15W35	0	0	0	N10W48.				
						N09E46	0	0	0	SC 19/0045Z. MAG-				
						S11W67	0	0	0	STORM IN PROGRESS				
263	20	19	058	091	22	N10W61	2	0	1	SUDDEN COMMENCEMENT	20	N10W61	A	SOLALERT 20/20
						N10E16	0	0	0	19/0045Z MAGSTORM		O.G.	Q	PROTON ARRIVAL ALERT 20/192230
						S11W85	1	0	0	ENDED 19/12XXZ.				
										MAJOR FLARE 19/2230Z				
										X-2 X-RAY EVENT.				
										TENFLARE 2270 FLUX				
										UNITS 19/2240Z.				
264	21	20	019	086	28	N09W78	0	0	0	A MINOR PCA IS IN	21	N09W78	Q	SOLALERT 21
										PROGRESS, BEGAN 20/				MAGALERT 21
										1000Z, MAX 2.7 DB				
										AT 20/1500Z AND IS				
										DECREASING				
265	22	21	000	082	25	NO SPOTS	0	0	0	MINOR GEOMAGNETIC	22	SPOTNIL		SOLNIL
										DISTURBANCE CON-				MAGALERT 22/24
										TINUES				
266	23	22	013	080	25	S14W70	0	0	0	CLASS M-5 X-RAY	23	S14W70	Q	SOLQUIET MAGALERT 23/24
										EVENT MAX 22/2359Z.				PROTON ARRIVAL ALERT
										A TENFLARE 666 FLUX				23/222359Z
										UNITS 22/2342Z NO				
										OPTICAL FLARE				
267	24	23	011	074	12	N12E16	0	0	0	M-3 X-RAY EVENT	24	N12E16	Q	SOLQUIET
										MAX AT 23/1241Z				MAGALERT 24
										PROBABLY FROM				
										BEHIND WEST LIMB				
268	25	24	018	072	22	N13E01	0	0	0	MAGSTORM ENDS 24/	25	N13E01	Q	SOLQUIET
										21XXZ, TENFLARE 130				MAGALERT MINOR 25/26
										UNITS 24/0403Z				
										5 MINUTES WEST LIMB				
										GROUND LEVEL EVENT				
										24/1630Z				
269	26	25	038	072	21	N13W12	0	0	0	NEUTRON MONITOR	26	N13W12	Q	SOLQUIET
										LEVELS ENHANCED				MAGALERT MINOR 26/27
										ENTIRE DAY DUE TO				
										SOLAR PARTICLE FLUX				
270	27	26	022	075	28	N14W25	0	0	0		27	N14W25	Q	SOLQUIET
														MAGALERT MINOR 27/28
271	28	27	026	077	17	N14W39	1	0	0	MINOR MAGNETIC	28	N14W39	Q	SOLQUIET
						N08E79	1	0	0	DISTURBANCE CON-		N08E79	Q	MAGALERT INTERMITTENT 28/02
										TINUES				
272	29	28	023	081	12	N08E64	0	0	0		29	N08E64	Q	SOLQUIET
						S07E66	0	0	0			S07E66	Q	MAGALERT 29/02 MINOR
273	30	29	107	090	10	N09E51	0	0	0		30	N09E51	Q	SOLALERT 30/05
						S06E20	3	0	0			S06E20	Q	MAGALERT 30/02
						S11E57	7	0	0			S11E57	E	
						S14E44	0	0	0			S14E44	Q	
274	01	30	098	091	13	N09E37	0	0	0	MINOR GEOMAGNETIC	01	N09E37	Q	SOLALERT 01/02
						S10E07	0	0	0	DISTURBANCE CON-		S10E07	Q	MAGALERT 01/02
						S06E41	15	1	0	TINUES		S06E41	E	
						S14E29	0	0	0			S14E29	Q	
						N15W37	0	0	0			N15W37	Q	

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

	1973 FINAL			1974 PROVISIONAL								
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	31	46	18	13	25	26	48	38	82	37	9
2	66	33	24	15	12	16	20	70	49	97	23	8
3	52	23	24	13	8	16	19	89	55	96	12	16
4	50	20	0	12	7	17	22	103	80	98	17	41
5	44	7	0	8	0	18	21	106	62	107	18	40
6	38	0	0	0	0	19	23	113	78	111	26	50
7	38	0	0	0	8	20	28	109	70	88	32	44
8	22	0	7	29	16	16	38	106	59	63	34	32
9	23	0	8	36	22	20	58	91	64	42	45	63
10	8	0	16	44	21	30	70	69	61	29	51	80
11	0	7	9	49	21	37	75	64	58	22	50	83
12	0	0	9	60	36	38	78	56	38	27	67	88
13	8	9	8	45	50	30	83	40	48	28	69	82
14	10	11	8	74	26	42	87	35	46	46	66	67
15	16	12	17	77	46	37	98	24	34	65	59	67
16	18	13	26	64	48	23	93	16	25	74	57	70
17	19	16	40	65	47	20	75	8	24	65	52	73
18	15	16	43	52	46	32	64	0	29	59	44	68
19	0	22	41	58	45	20	51	0	32	45	43	58
20	0	16	47	49	43	9	49	0	23	50	32	34
21	0	23	51	37	37	16	43	0	20	55	28	13
22	16	29	51	36	45	31	28	7	11	61	34	0
23	28	39	47	28	35	27	17	9	11	64	34	7
24	36	38	51	16	29	21	19	7	16	62	28	11
25	53	46	53	8	17	18	20	0	15	61	25	11
26	59	62	57	8	20	10	20	20	8	67	8	13
27	53	60	26	0	42	9	38	18	8	60	8	19
28	62	61	12	8	35	17	30	32	18	61	8	23
29	65	64	0	7		19	22	20	30	42	14	38
30	55	59	0	0		25	16	0	52	41	8	60
31	37		0	0		26		52		38	15	
MEAN	30.7	23.9	23.3	29.3	27.7	22.7	44.4	42.3	38.7	61.5	33.7	42.2

1973 yearly mean = 38.0

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

	1973			1974								
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109.8	87.8	86.9	71.5	71.8	76.4	72.1	98.5	97.9	105.4*	85.1	77.8
2	106.1	83.9	86.3	73.2	73.1	76.5	71.3	113.1	100.1	112.7*	85.2	79.4
3	103.5	81.1	82.7	73.3	73.1	77.1	71.6	115.5	98.9	118.5*	83.0	79.2
4	96.9	77.4	78.6	72.5	72.9	79.8	73.3	116.8	98.2	127.8*	85.8	81.8
5	90.6*	73.9	73.6	72.1	74.0	78.6	76.3	119.7	96.5	125.6*	86.5	81.5
6	85.9	73.2	70.9	74.7	75.4	77.5	80.0	123.0	95.0*	121.5	88.0	82.2
7	82.2	72.1	70.4	76.0	77.4	76.8	80.2	119.3	92.8	110.9*	95.8	85.4
8	80.1	70.4	70.9	79.7	78.8	77.0	81.1	115.8	95.0*	104.7*	89.4	93.4
9	79.1	70.4	71.2	84.9	80.8	80.2	87.8	110.8	95.1	95.5	87.5	96.0
10	77.0	70.7	72.3*	89.2	80.5	86.1	93.5*	105.1	97.0	88.2	88.3	102.0
11	74.9	71.2	71.9	91.0	77.5	85.9	99.8	104.3	95.3*	83.1	94.4	104.6
12	72.0	70.7	72.5	94.6	76.5	86.2	105.6*	97.1	91.7	83.3	99.4	105.6
13	70.5	72.6	73.1	94.8	77.3	84.5	102.8	93.5	89.8	83.3	95.2	106.8*
14	72.7	73.8	73.8	98.7	76.3	81.9	116.3	88.2	88.1	83.3	93.2	104.1
15	75.7	75.8	76.6	91.8	83.7	82.9	122.9*	84.9	84.7	85.5	92.1	103.6
16	75.6	75.6	79.7	90.0	84.7	81.8	115.0*	80.3	86.2	91.3	96.6	102.0*
17	79.5	75.3	82.1	89.2	85.9	82.7	101.8	75.8	87.2	91.0	98.8	100.3
18	78.3	75.5	84.9	87.1	87.5	80.2	98.0	75.2	84.4	86.5	95.1*	100.0
19	76.7	75.4	87.8	85.8	82.7	80.8	87.5*	73.0	82.8	87.1	88.8	91.7
20	73.4	76.8	89.9	84.4	82.2	79.6	92.3	72.5	83.8	86.7	82.6	85.9*
21	80.0	80.7	97.6	79.7	82.2	79.1	79.5	71.9	81.4	90.1	81.2*	82.7
22	85.0	84.7	96.7*	83.5	82.2	80.0	75.3	72.2	82.3	95.3*	80.6	81.0
23	89.9	86.5	96.0	81.0	84.2	79.8	73.9	71.5	80.2	98.5	81.0	74.6
24	97.6*	87.8	98.1	77.8	80.9	76.6	75.0	72.4	79.1	92.1*	77.4	72.8
25	101.0	88.0*	97.6	74.1	78.6	74.3	76.5	72.4	78.8	89.5	75.7	72.8
26	101.0	91.8*	92.9	71.5	76.2	72.6	74.9	79.6	79.6	93.1	73.8	75.4
27	101.7*	88.8	88.6	70.7	76.4	71.8	75.3	85.1	82.4	87.9	72.7	77.0
28	100.7	90.7	81.7*	70.8	75.8	70.4	77.9	87.4	83.0	84.5	71.8	80.7
29	99.1	94.9	76.4	70.7		71.5	81.6	89.4	89.4*	85.2	72.4	90.7
30	97.4*	95.7*	74.1	70.8		72.1	91.7	91.3	93.1*	85.9	74.2	91.5
31	90.5		72.0	71.3		72.9		95.1		87.4	75.6	
MEAN	87.1	79.7	81.5	80.4	78.9	78.4	86.7	92.6	89.0	95.5	85.1	88.7

* adjusted for burst

DAILY SOL

SEPTEM

SEP 1974	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX		
			R_Z	$R_{A'}$	OTTAWA 2800	AFCRL 15400	AFCR 8800
1	244	15	8	10	76.4	522	
2	245	16	8	10	78.0	528	
3	246	17	16	15	77.9	524	
4	247	18	41	32	79.6	521	
5	248	19	40	37	80.2	518	267
6	249	20	50	40	80.9	516	262
7	250	21	44	44	84.1	516	262
8	251	22	32	30	92.0	520	
9	252	23	63	58	94.7	505	282
10	253	24	80	77	100.6	527	287
11	254	25	83	80	103.3	517	297
12	255	26	88	88	104.2	524	301
13	256	27	82	87	105.4*	536	310
14	257	1	67	65	102.8	516	298
15	258	2	67	60	102.5	536	293
16	259	3	70	68	100.9*	537	309
17	260	4	73	75	99.3	522	281
18	261	5	68	70	99.1	523	282
19	262	6	58	55	90.9	514	279
20	263	7	34	29	85.2*	516	273
21	264	8	13	12	82.0	521	261
22	265	9	0	0	80.4	521	
23	266	10	7	0	74.1	514	
24	267	11	11	4	72.4	518	262
25	268	12	11	66	72.4	514	263
26	269	13	13	10	75.0	514	264
27	270	14	19	15	76.7	519	264
28	271	15	23	18	80.4	524	262
29	272	16	38	38	90.4	525	278
30	273	17	60	55	91.2	521	278
MEAN			42.2	39.6	87.8	521	279

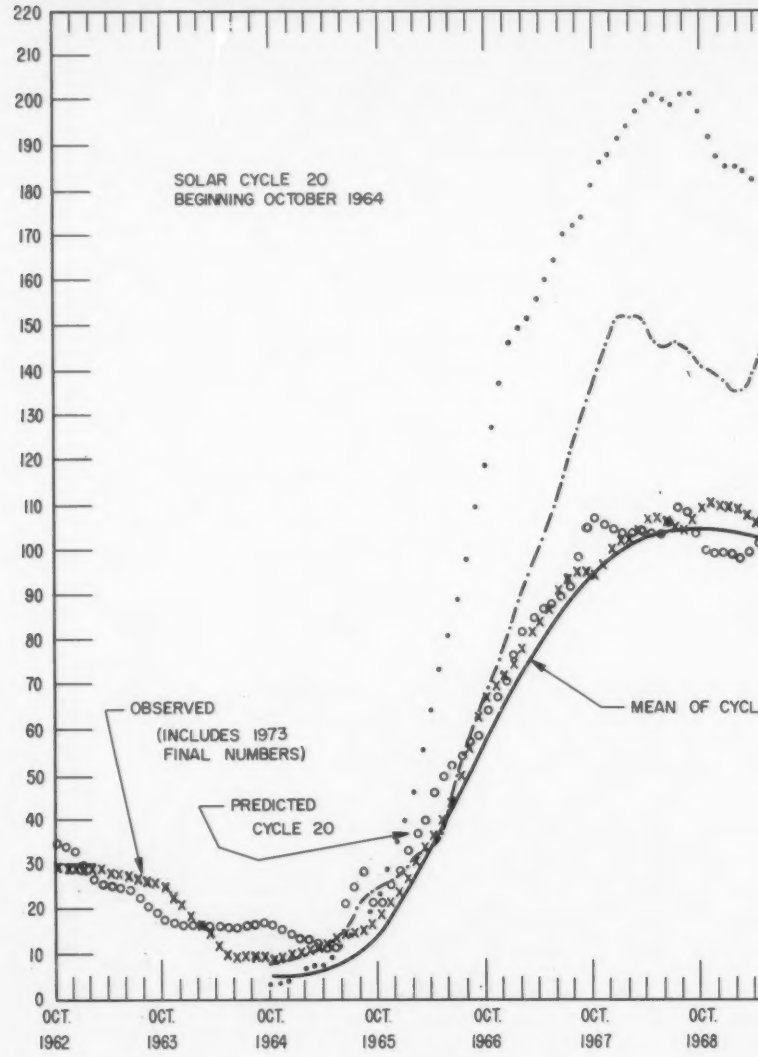
* Corrected for burst.

OLAR INDICES

EMBER 1974

SOLAR FLUX ADJUSTED TO 1 A.U.							
FCRL 3800	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606	AFCRL 410	AFCRL 245
	122	77.8	75.6	49.8	38.4	24.2	9.5
	122	79.4	76.7	53.2	38.6	23.9	9.1
	120	79.2	74.0	50.9	37.1	23.0	9.1
	122	81.0	78.1	54.5	41.5	24.2	8.8
267	125	81.5	78.5	55.0	40.7	22.8	8.6
262	125	82.2	79.0	55.8	39.6	23.9	8.5
262	127	85.4	82.0	58.8	44.9	32.9	17.6
		93.4		63.0	42.7	25.2	10.5
282	137	96.0	92.0	62.2	43.1	26.4	12.6
287	145	102.0	96.5	65.8	44.5	26.9	13.8
297	154	104.6	101.6	64.1	50.4	35.4	17.8
301	157	105.6	101.9	64.9	43.4	30.6	21.4
310	171	106.8*	110.6	69.8	45.2	27.5	15.9
298	155	104.1	101.1	64.4	42.3	27.6	36.5
293	155	103.6	99.0	67.1	50.7	35.5	21.1
309	166	102.0*	104.7	68.2	48.1	26.5	55.9
281	145	100.3	96.2	63.3	42.2	27.6	18.7
282	145	100.0	101.4	70.3	45.7	31.2	23.2
275	132	91.7	89.8	61.0	41.8	27.6	14.7
273	136	85.9*	83.5	57.7	41.1	25.0	9.3
261	128	82.7	80.9	53.4	39.4	23.9	9.5
	122	81.0	77.8	50.6	39.2	26.2	22.1
	119	74.6	72.3	49.1	34.9	22.0	9.0
262	116	72.8	72.0	47.0	33.5	22.1	9.5
263	117	72.8	71.5	49.6	34.2	20.2	9.4
264	119	75.4	72.5	47.6	34.2	20.1	9.5
264	122	77.0	74.9	49.7	35.0	20.7	9.5
262	124	80.7	76.7	52.8	35.4	21.7	9.6
278	135	90.7	86.3	57.8	37.8	23.3	11.0
278	134	91.5	88.2	57.3	41.9	24.3	13.4
279	134	88.7	86.0	57.8	40.9	25.8	15.2

7
Sep 74



PREDICTED AND OBSERV

RVED SUNSPOT NUMBERS

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS

CYCLE 20

MONTH	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1964										9.6	10.2	11.3
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.5
1966	27.7	31.3	34.5	37.4	40.7	44.6	50.3	56.6	63.1	67.6	70.2	72.7
1967	75.0	78.8	82.2	84.6	87.4	91.3	94.1	95.3	95.3	95.0	97.1	100.6
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.8	107.0	109.9	110.6	110.1
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.8	106.4	105.4	104.1	104.6	104.9
1970	105.6	106.0	106.2	106.1	105.8	105.3	103.8	101.0	97.2	93.9	89.4	84.1
1971	80.4	77.8	74.4	70.9	68.1	66.7	65.4	64.6	65.8	66.2	66.8	69.4
1972	70.8	71.2	72.4	73.4	72.9	70.5	68.2	65.5	62.2	60.6	58.7	55.1
1973	50.9	46.5	44.2	42.7	40.7	39.1	37.6	36.3	34.7	33.2	32.7	32.6
1974	34.2	36.1	35.7	35.1 (1)	34.6 (3)	33.5 (5)	31.9 (6)	29.9 (7)	27.7 (7)	25.8 (8)	24.1 (9)	22.9 (10)
1975	21.6 (9)	20.2 (9)	19.1 (9)	17.9 (9)	16.6 (9)	15.7 (11)	14.9 (12)					

For each month, the upper figure is the observed or predicted Zürich smoothed sunspot number. The lower figure in parenthesis is the corresponding absolute value of the 90% prediction interval, an indication of the uncertainty above and below the predicted number. Observed numbers are those with no prediction intervals. The observed smoothed sunspot numbers are based on final Zürich numbers through 1973.

The predicted sunspot numbers are derived from a regression analysis based on cycles 8 through 19. Tests indicate that earlier cycles are from a different statistical population. From July 1968 - February 1970 a regression analysis based on cycles 1 through 19 was used because it had not then been proven that two populations exist.

SOLAR FLARES

PARTIAL LISTING

Solar Flares for which at least one observatory has assigned a numerical importance of "1" or greater.

SEPTEMBER 1974

OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM-POR-TANCE	OBS.		MEASUREMENTS				REMARKS
	DATE SEP	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hg	MAX. INT. %	
BOUL	05	2326	2358	2332	S14	E53	.836		10.0	32	1F		C	2332	1.29	2.16			
MANI	05	2328E	2355	2330	S14	E54	.845		10.0	27D	SN	1		2330	.83	1.45			F
RAMY	07	1900	1925	1902	S14	E30	.596		10.0	25	SB	4	C		1.39				DE
BOUL	07	1900	1933	1903	S14	E28	.573		9.9	33	1N		C	1903	1.93	2.18			
PALE	07	1901	1912D	1902	S15	E29	.593		10.0	11D	SN	3	C		1.13				F U
RAMY	07	1905E	1925	1908	S15	E32	.626		10.2	20D	SB	4	C		1.55				DE
PALE	07	2258	2328	2305	S15	E18	.477		9.3	30	SN	3	C		1.29				
BOUL	07	2258	2356	2308	S15	E19	.487		9.4	58	1N		C	2308	2.25	2.38			
UPIC	09	1002E	1010		N11	E82	.987	13225	15.6	8D	1N		P	1002	.63				
RAMY	09	1847	1100	1049U	N14	E76	.965		15.1	13	SF	3	C		.46				DE
TEHR	09	1851	1058	1054	N10	E80	.981		15.5	7	SN	3	C		.17				DE
UPIC	09	1100	1120U	1105U	N10	E79	.978	13225	15.4	20U	1F		P	1105	.63				
BOUL	09	1717	1800D	1721	N 9	E75	.962		15.3	43D	SN		C	1721	.64	1.95			
PALE	09	1717	1742D	1720	N 7	E76	.967		15.4	25D	SB	3	C		.36				U
MCMA	09	1720	1810		N05	E78	.976	13225	15.6	50	1N		C	1723					E
RAMY	09	1723E	1725D	1725U	N 8	E79	.979		3.8	2D	SB	1	V		.50				DE
BOUL	09	1731	1739	1734	N13	E73	.950		15.2	8	SF		C	1734	.32	.92			
MCMA	10	1346	1415D	1358	N10	E66	.908	13225	15.5	29D	1F		C	1358	.93	2.20			EH
PALE	10	2120E	2243D	2137	N10	E61	.869	13225	15.5	83D	1B	3	V		2.68				DE U
MCMA	10	2120E	2120D		N05	E59	.854	13225	15.3		SF		P	2120	.41	.80			E
BOUL	10	2124	2252D	2155	N 9	E61	.869		15.5	88D	3N		C	2155	6.43	13.30			
MANI	10	2200E	2300D	2200U	N10	E60	.860	13225	15.4	60D	2B	1		2200	4.64	8.46			ZU
ATHN	11	1002E	1008	1004U	N10	E47	.726		14.9	6D	SF	2	C		.50				DE H
WEND	11	1003E	1014		N08	E47	.726	13225	14.9	11D	2N		P		6.19	9.00			
ATHN	11	1010	1014	1012	N10	E47	.726		14.9	4	SF	2	C		.17				DE H
UPIC	11	1106E	1116		N08	E54	.804	13225	15.5	10D	1N		P	1106	1.68				IT
WEND	13	1458	1530	1502	N12	E20	.347	13225	15.1	32	2N		P	1402	6.19	6.60			
UPIC	13	1502E	1519	1503	N12	E18	.315		15.0	17D	SB		P	1503	.85				ITD
MCMA	13	1508E	1526D	1510	N12	E18	.315	13225	15.0	18D	SB		C	1510	.83	.80			EHL
WEND	13	1513	1714D	1529	N14	E24	.415	13225	15.4	121D	3B		P	1529	21.66	25.20			
RAMY	13	1458	1531	1500	S12	E19	.453	13224	15.0	33	1B	4	C		3.25				DE
RAMY	13	1505	1758	1526	S13	E24	.519	13224	15.4	173	2B	4	C		8.13				U U
MCMA	13	1510	1814D		S15	E23	.528	13224	15.4	184D	2B		C	1526	6.19	7.00			ILU
RAMY	13	1510	1758	1517	S13	E26	.542	13224	15.6	168	2B	3	C		5.28				UDE
UPIC	13	1512	1611D	1525	S15	E25	.549	13224	15.5	59D	2B		P	1525	6.31				UF
PALE	13	1639E	1748D	1659U	S13	E25	.530	13224	15.6	69D	1N	3	C		2.27				UDE
MCMA	16	1305E	1600D		N05	W18	.310	13225	15.2	175D	1N		C	1350	2.27	2.20			FH
UPIC	16	1325	1345U	1335	N06	W21	.357		15.0	20U	SF		P	1335	1.47				IT
UPIC	16	1525U	1530		N07	W14	.240		15.6	5U	SN		P	1525	.63				IT
TEHR	18	0720E	0735D	0728	N 8	W38	.611		15.5	15D	SN	4	V		.41				DE
BUCA	18	0720	0800		N11	W39	.625	13225	15.4	40	1F		C	0738	2.21	2.80			E
ATHN	18	0723	0757	0729	N12	W39	.626		15.4	34	SN	1	C		.66				F
MANI	18	0728E	0748D	0730U	N08	W37	.597		15.5	20D	SF	1		0730	1.03	1.29			F
TEHR	18	1046E	1148D	1057	N 8	W40	.638		15.4	62D	SN	4	V		1.03				F
UPIC	18	1110	1225	1120U	N10	W42	.664	13225	15.3	75	2N		P	1120	4.00				ITF
MCMA	18	1142E	1345D		N12	W41	.652	13225	15.4	123D	1B		P	1150	1.55	2.10			E
BOUL	18	1528	1635	1604	N11	W43	.677		15.4	67	1F		C	1604	2.03	2.79			
MCMA	18	1546E	2010		N12	W43	.677	13225	15.4	264D	1B		P	1649	2.06	2.80			F
BOUL	18	1610	1840	1635	N 7	W48	.739		15.1	150	1N		C	1635	1.39	2.08			
PALE	18	1633E	1819	1633U	N 8	W42	.664		15.5	106D	1N	3	V		2.68				U F
BUCA	19	0625	0651		N11	W58	.842	13225	14.9	26	1F		C	0628	2.21	4.10			E
MANI	19	0626E	0629D	0628	N11	W52	.782		15.4	3D	SF	1		0628	.62	.98			F
BOUL	19	1810	1837	1815	S11	W63	.908		15.0	27	1F		C	1815	1.07	2.38			
BOUL	19	2210	0015D	2244	N12	W62	.876		15.3	125D	2N		C	2244	4.82	10.41			
PALE	19	2225	0000	2238U	N 7	W63	.887	13225	15.2	95	2B	2	V		2.89				UDE
MANI	19	2253E	0208D	2253U	N08	W63	.886	13225	15.2	195D	2B	2		2253	6.19	11.82			E
MANI	19	2253E	0106D	0000	N04	W65	.904		15.1	133D	SN			0000	.83	1.62			
MANI	19	2253E	0106D	2253U	N04	W65	.904		15.1	133D	SN	2		2253	.41	.81			F
MITK	20	0134E	0155D		N10	W62	.877	13225	15.4	21D	1B		C	0135	1.75	3.60			E
BOUL	21	2325	2345	2334	N12	W90	1.000		15.2	20	1F		C	2334	.64	2.63			
MITK	23	0021E	0045D		N13	W90	1.000	13225	16.3	24D	1B		C	0042	.62				D
UPIC	23	1200E	1206U		N07	W90	1.000	13225	16.8	6U	1N		P	1200	.42				A
TEHR	29	1042	1109	1059	S15	E65	.927		4.3	27	SF	4	C		.27				
BUCA	29	1054	1120		S06	E65	.914	13263	4.3	26	1F		C	1100	1.10	2.90			F
ATHN	29	1058	1105	1100	S 5	E58	.858		3.8	7	SB	4	V		.50				DE
TEHR	29	1215	1232	1220	S 5	E63	.899		4.2	17	SF	4	C		.37				F

SOLAR FLARES

PARTIAL LISTING

Solar Flares for which at least one observatory has assigned a numerical importance of "1" or greater.

SEPTEMBER 1974

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE SEP	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
ATHN	29	1218	1224	1220	S 9	E65	.918		4.4	6	SF	4	V		.66				F
BUCA	29	1221	1230		S07	E63	.901	13263	4.2	9	1N		C	1222	1.10	2.70			
MANI	30	0133E	0205	0138	S07	E54	.825	13263	4.1	32D	1F	1		0138	1.55	2.63			F
MITK	30	0133E	0151	0142	S07	E55	.835		4.2	18D	1B		C	0142	2.37	4.10			E
PALE	30	0136E	0137D	0136U	S 8	E54	.827		4.1	1D	SN	1	C		.72				F
TEHR	30	0647	0735	0703	S 6	E51	.793		4.1	48	SB	4	C		1.19				H Z
ATHN	30	0652	0750	0702	S 6	E52	.803		4.2	58	SN	3	C		1.49				U F
MITK	30	0654	0657D	0656	S06	E54	.823	13263	4.3	3D	1B		C	0656	2.78	4.50			E
BUCA	30	0654	0745		S07	E50	.785	13263	4.0	51	1N		C	0658	3.32	5.10			F
ATHN	30	0658	0719	0700	S 8	E48	.767		3.9	21	SN	3	C		1.32				U

Note: Catania and Capri-S express Maximum Intensities in percent of the local undisturbed chromosphere instead of percent of the local continuum. Parentheses are used to indicate this difference.

"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked assymetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

SOLAR FLARES

Date, time (UT) and coordinates of Subflares not included in preceding table.

SEPTEMBER 1974

05 1312 N07 E19
07 0251E S14 E40
08 1539 S13 E17
09 1611 N 4 W37
10 1310 N 9 E62

10 1752 N08 E56
10 2320E N12 E59
11 0634 S13 E52
11 2209E N11 E43
12 0632 S06 W36

12 1040E N04 E38
12 1749 S 4 W46
12 2000 N 6 W78
13 0625 S12 E38
13 1438 N12 E22

14 0530 N 7 E14
14 0745 N12 E 9
14 1033 N 8 E12
14 1426E S 5 W66
15 1256E N 6 W 6

15 2213E N12 W12
16 0300 S12 W14
16 0630 N 7 W14
16 0815E N10 W19
16 1058 N07 W18

16 1635E N 7 W20
17 0715 N 7 W30
17 1102 S10 W33
17 1326 N12 W29
17 1758 N12 W38

17 1835 S 9 W36
18 0053E N10 W34
18 0451 N08 W36
18 1925 S11 W67
20 1243 N14 W80

27 0313E N05 E89
28 2009 N 5 E90
29 0552 S16 E68
29 0930 S08 E65
29 1037E S 5 E58

29 1315 S12 E24
30 0205E S09 E57
30 0528 S05 E47
30 0608E S 6 E47
30 1347 S 4 E40

05 1317E N 7 E20
07 1251 S14 E33
08 1544E S13 E17
09 1658E N 8 E79
10 1317E N10 E64

10 1754E N 8 E57
11 0015E N05 W58
11 0915 N08 W63
11 2255E N11 E43
12 0715 N12 E37

12 1240 N 7 E37
12 1840 N10 E30
12 2021 N 6 E36
13 0635E N07 E26
13 1445 N12 E23

14 0601 N08 E17
14 0813 N 8 E12
14 1035 N06 E12
14 1901 N13 E 3
15 1604E S12 W10

15 2353E N 6 W10
16 0331E S10 W16
16 0720 N06 W16
16 0840 N07 W16
16 1100 N 7 W18

16 2204 N05 W25
17 0716 N 6 W28
17 1105 S12 W30
17 1500 S14 W33
17 1803E N13 W40

17 1921 N10 W33
18 0104E N 8 W37
18 0452E N10 W37
19 0146E S12 W67
21 0406E N 8 W86

27 1055E N13 W28
28 2033E S16 E62
29 0554 S 9 E69
29 0933 S17 E67
29 1125 S12 E26

29 1648 S 6 E62
30 0207 S07 E57
30 0548 N11 E45
30 0821 S 6 E46
30 1949 S 6 E40

06 0746E N08 E10
07 1528 S15 E31
08 1617E N13 E90
09 1658 N05 E78
10 1319E N 8 E65

10 1805E N05 E61
11 0142E N11 E55
11 0920 S14 W50
12 0412 S 8 W35
12 0720 N12 E38

12 1334 S 5 W43
12 1903 N12 E30
12 2044E N11 E30
13 0635E N13 E30
14 0204E N12 E17

14 0642 N12 E14
14 0813 N 8 E13
14 1035 N 7 E10
14 1905E N11 E03
15 1654 N10 W11

16 0225E N11 W14
16 0343 S 9 W16
16 0731 N 6 W 9
16 0856 N 9 E70
16 1140 N07 W17

16 2207E N 7 W23
17 0718 N05 W30
17 1140 N 7 W28
17 1501 S12 W33
17 1808 N 8 W33

17 2002 N12 W33
18 0107E S16 W33
18 0825 N07 W43
19 1930 N10 W66
21 2022E N14 W88

27 1056E S14 E30
28 2118 N 6 E65
29 0805 S11 E30
29 0936E S 6 E63
29 1126 S13 E28

29 1833E S 6 E59
30 0314 S 6 E53
30 0548 S 5 E47
30 0821 S 5 E46

07 0209E S14 E40
07 1531 S13 E32
08 2117 N 7 E85
09 2023E N 5 E74
10 1400 N07 W48

10 1831E N 6 E65
11 0239E S14 E59
11 0945E N06 E52
12 0625 S12 E42
12 0754 S17 W64

12 1400E N06 E36
12 1918E N10 E30
12 2046E N11 E30
13 1032 N12 E20
14 0246 N 6 E16

14 0643 N11 E12
14 0820E N07 W12
14 1223 N14 E10
15 0535E N 6 E 2
15 1803 N10 W12

16 0225E N11 W14
16 0438 S10 W16
16 0750E N06 W16
16 0859 N11 E70
16 1140 N11 W21

17 0122 N11 W29
17 0720 N06 W30
17 1150 N08 W31
17 1613 N12 W32
17 1824 N12 W32

17 2212 N12 W34
18 0316 N 4 W40
18 0825E N 8 W39
19 2052 S10 W65
25 0446 S11 E86

27 1253E S14 E31
29 0130 S05 E66
29 0805 S13 E28
29 1003 S 5 E63
29 1248 N14 W58

29 1846 S12 E23
30 0342 S 7 E56
30 0549 S 5 E46
30 0904 S 5 E52

07 0209E S14 E40
07 1533 S17 E32
09 1242 N 7 W36
09 2131E N 7 E75
10 1520E N08 E57

10 1838E N 8 W51
11 0326E N06 W58
11 1150 N06 E51
12 0625 S12 E43
12 0924U N05 E38

12 1522 N13 E31
12 1941 N 5 E36
12 2135E N05 E36
13 1132 S10 E21
14 0528 N 8 E15

14 0644E N13 E13
14 0943 N 8 E13
14 1225 N11 E14
15 0536 N 6 E 2
15 1831E N11 W 9

16 0238E N11 W16
16 0438 S10 W17
16 0751 N 7 W16
16 0933 N 7 W11
16 1229 N13 W16

17 0150E N10 W28
17 0940 N 8 W27
17 1225 N 8 W24
17 1752 N10 W37
17 1828 S 9 W37

17 2222E N11 W33
18 0318E N05 W41
18 1055 N13 W39
19 2112E S12 W63
25 0504 S11 E86

28 0019 N13 W38
29 0335 S06 E64
29 0807 S12 E30
29 1016 S 6 E65
29 1313 S11 E26

29 1904 S 6 E57
30 0416 S 7 E50
30 0558E S 6 E47
30 0904 S 6 E55

07 0224E S13 W35
07 1909E S15 W31
09 1244E N 9 W30
10 0845E S 5 W14
10 1646E N 9 W51

10 2256E N 5 E60
11 0632E S13 E54
11 1215E W08 E53
12 0630 S12 E44
12 1031 S04 W43

12 1605 N05 E36
12 1948E N05 E38
13 0212 S13 E32
13 1235E N13 E20
14 0528 N07 E15

14 0742 N14 E 8
14 0943 N 7 E11
14 1423 S 4 E69
15 0635E N 4 W 1
15 2015E N12 W11

16 0258E S10 W16
16 0438 S11 W15
16 0755E N 7 W15
16 1056 N 7 W18
16 1405 S11 W24

17 0326 N 6 W26
17 1050 N07 W30
17 1243 N 9 W29
17 1756 N10 W36
17 1828 S13 W33

17 2312E S11 W37
18 0324E N 7 W39
18 1055 N06 W46
20 1242E N15 W79
25 1109 S11 E85

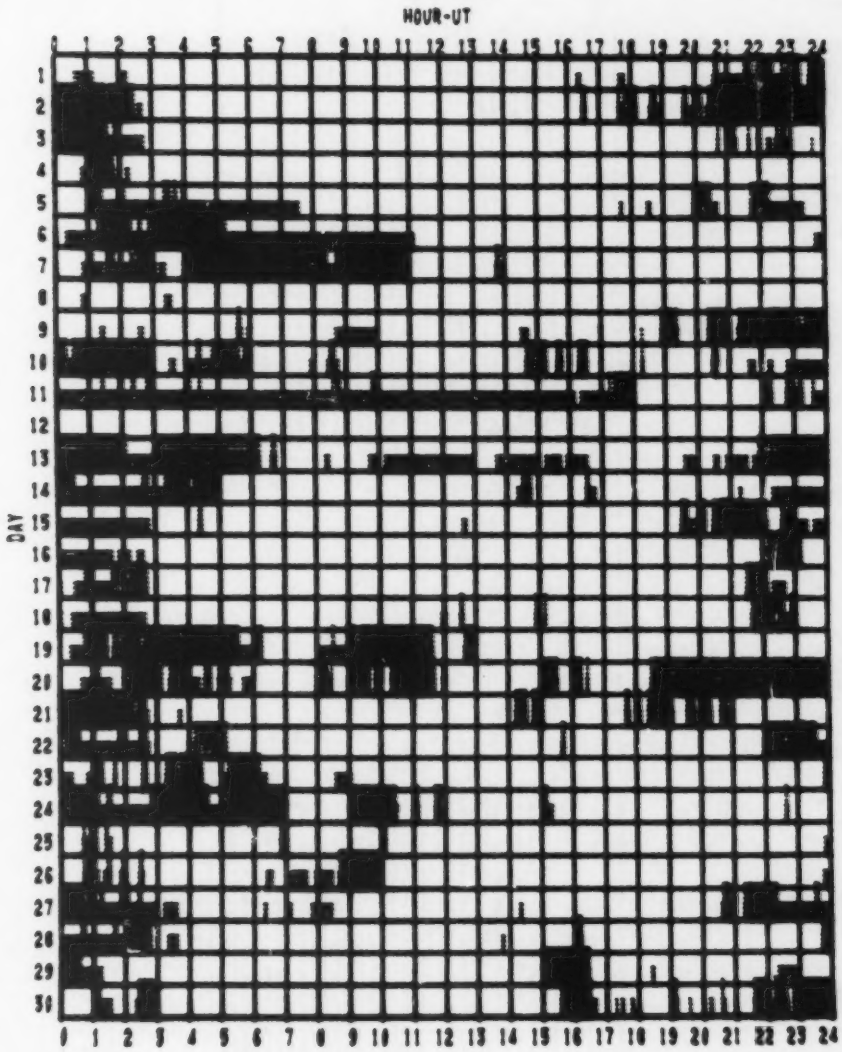
28 1404 S 5 E73
29 0437 S14 E62
29 0807 S13 E31
29 1025 S05 E60
29 1314E S13 E27

30 0056 S 7 E49
30 0419E S08 E50
30 0604 S 5 E46
30 1346 S 5 E49

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

SEPTEMBER 1974



Observatories included in total patrol:

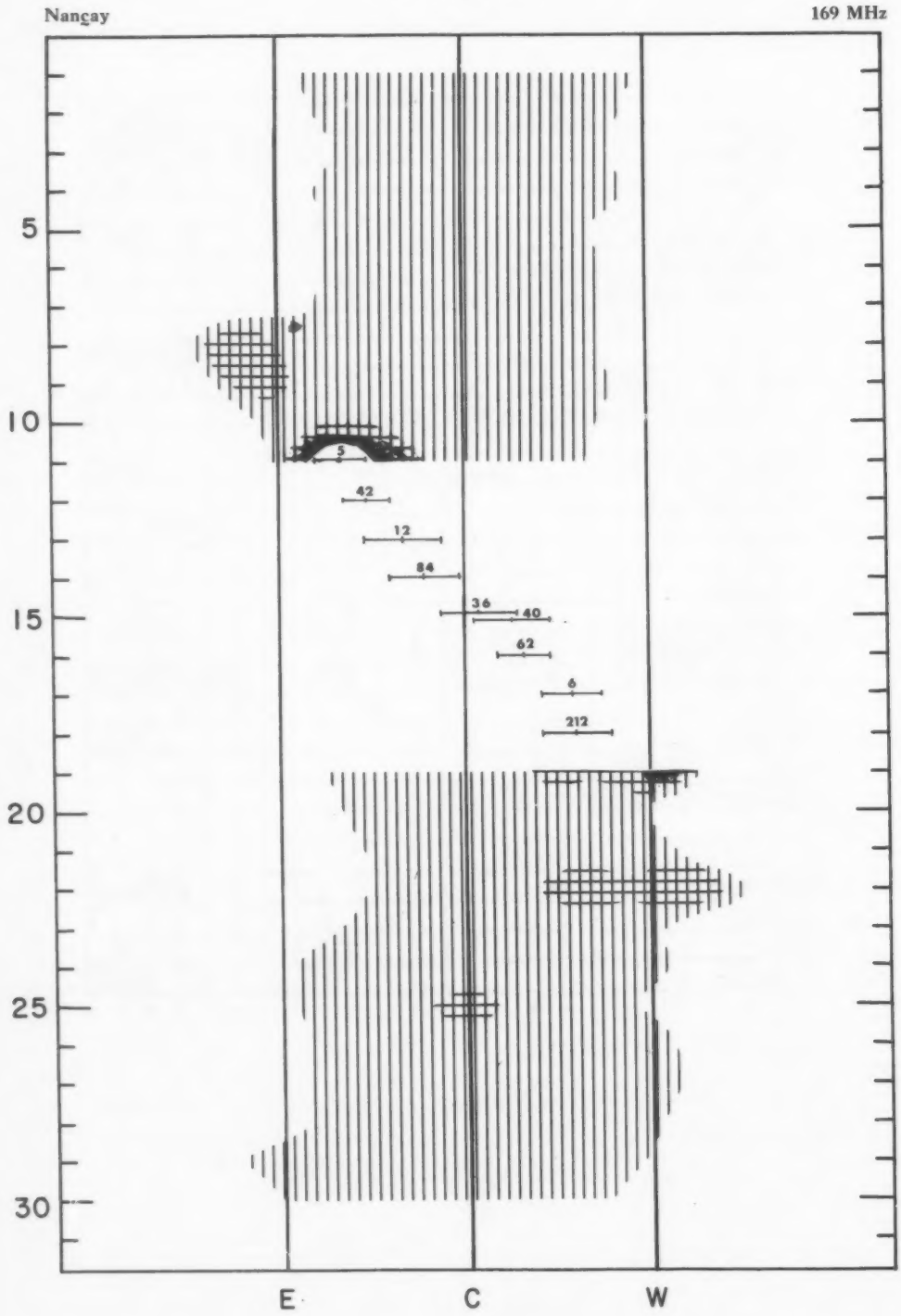
	Bucharest	Manila	Mitaka	Ramey	Upice
Boulder	Herstmonceux	McMath-Hulbert	Palehua	Tehran	Wendelstein

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

14
Sep 74

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

SEPTEMBER 1974

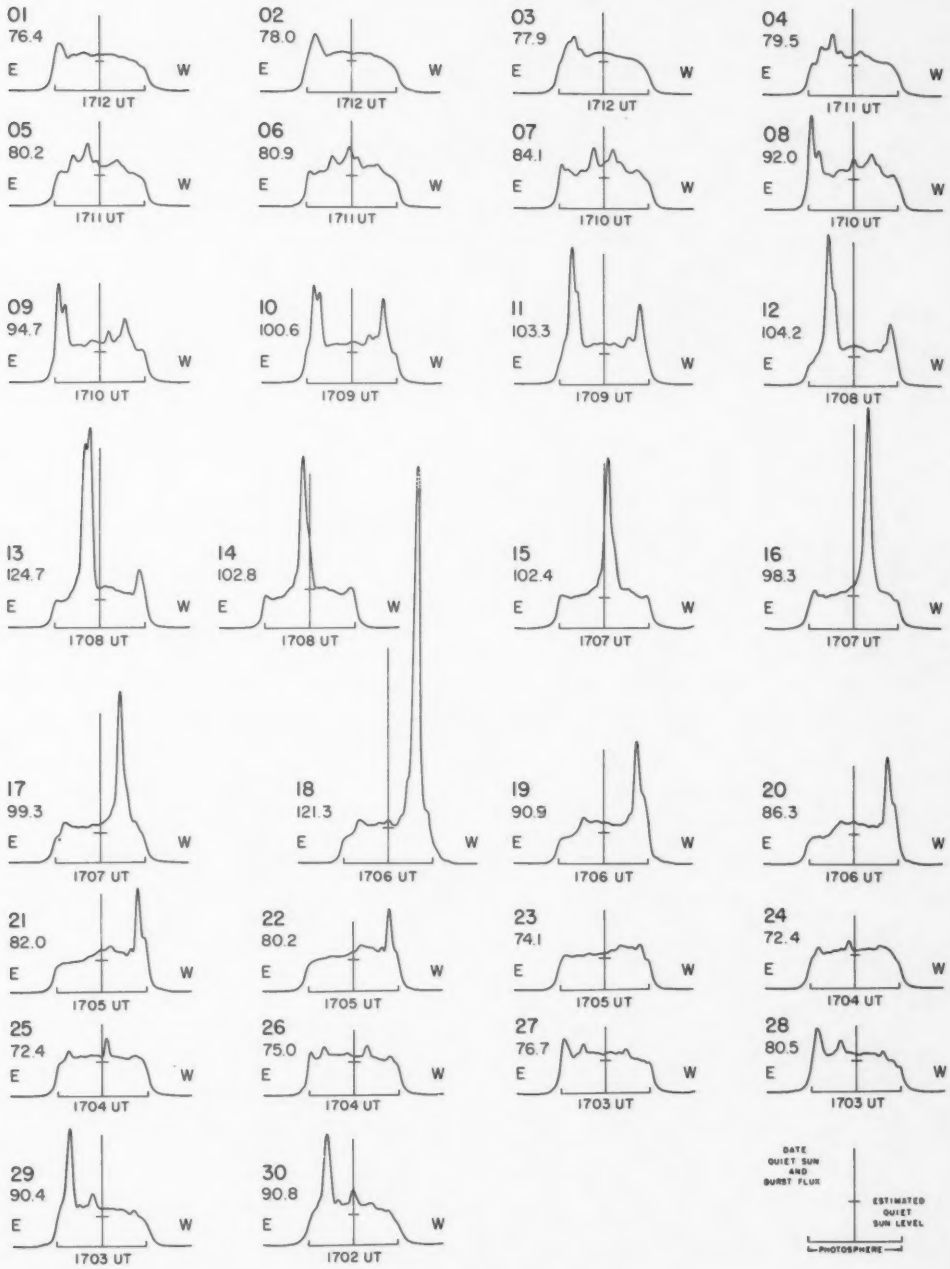


EAST - WEST SOLAR SCANS

September 1974

ALGONQUIN RADIO OBSERVATORY
CANADA

10.7 cm
Fan Beam with 1.5 minutes of arc
E - W Resolution



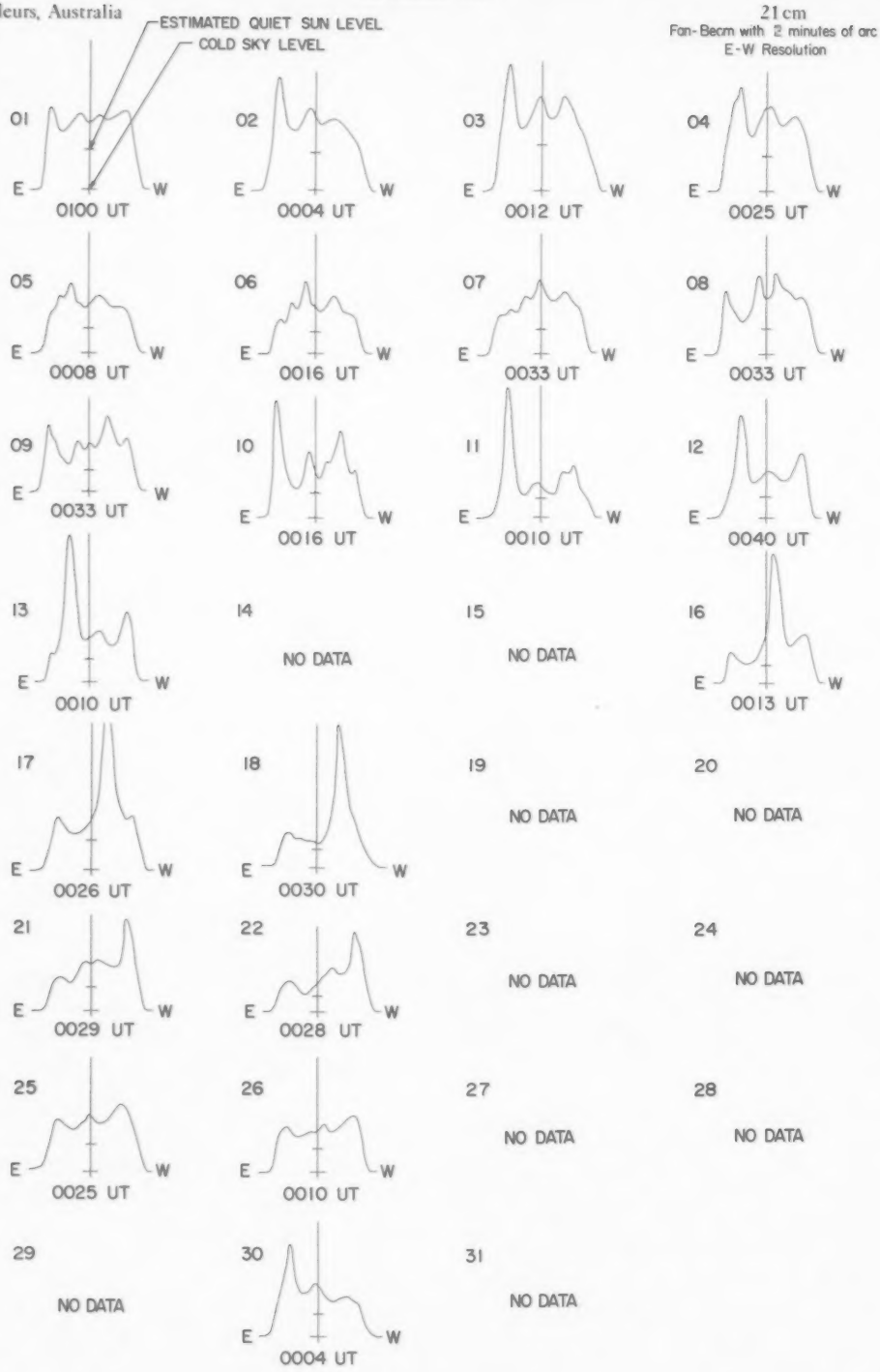
16
Sep 74

EAST-WEST SOLAR SCANS

SEPTEMBER 1974

Fleurs, Australia

21 cm
Fan-Beam with 2 minutes of arc
E-W Resolution



EAST-WEST SOLAR SCANS

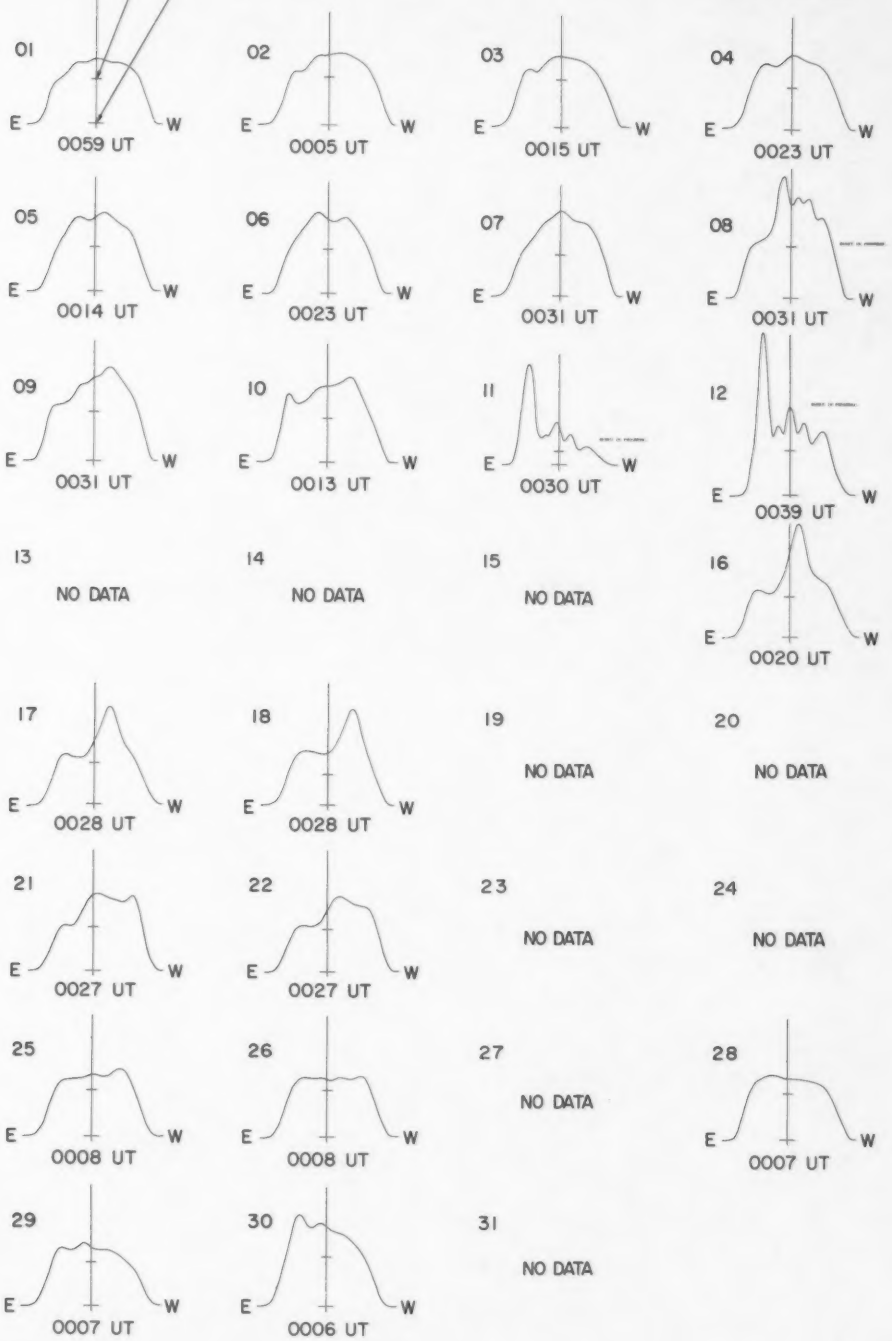
SEPTEMBER 1974

Fleurs, Australia

ESTIMATED QUIET SUN LEVEL

COLD SKY LEVEL

43 cm
Fan-Beam with 4 minutes of arc
E-W Resolution



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
SEPTEMBER 1974

SEP 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
5	2800	OTTA	27	1310		180	.8	0.7		
	2800	OTTA	24	1310	1330	20	.8	0.4		
	2800	OTTA	24P	1330		150	.8			
	2800	OTTA	20	1330	1340	40	.8	0.4		
	2800	OTTA	26	1600	1610	10	- .8	-0.4		
	2695	PENT	20	2310	2332	80	1.4	0.7		
6	2800	OTTA	20	1500	1517	50	1.8	0.9		
7	2695	BOUL	8	1900	1902	3.5	10.0	3.0		
	2695	SGMR	3	1900.9	1901.9	3.9	10.4	3.1		
	2695	PENT	25	2110	2345	155	4.0	2.0		
	2800	OTTA	20	2210	2213.5	10	1.6	0.8		
	2695	PENT	21	2300	2310	45	3.4	1.9		
	2695	BOUL	21	2300	2306.5	25.5	12.0	3.0		
	2695	PENT	1	2303.5	2305	4	6.8	3.4		
	2695	MANI	1	2303.5	2305.2	7.3	8.0	2.7		
	2695	PENT	24	2345		105 D	4.0			
	2800	OTTA	3	1901	1901.9	2.7	10.8	2.8		
	2800	OTTA	29	1903.2	1903.2	17	1.0	0.5		
8	2800	OTTA	20	1920	1940	40	.8	0.4		
	2695	PENT	27	2105		240	1.2	1.1		
	2800	OTTA	24	2105	2130	25	1.2	0.6		
	2800	OTTA	2	2115	2118	8	3.4	1.7		
	2695	BOUL	3	2115	2118	7	4.0	1.0		
	2695	PENT	24	2130		190	1.2			
	2695	PENT	21	2305	2318	85	4.6	2.3		
	2695	PENT	1	2310	2311	3	1.8	0.9		
	2695	PENT	26	2340	2505	25	-1.2	-0.6		
9	2800	OTTA	27	1140		58	1.8	1.6		
	2800	OTTA	24	1140	1148	8	1.8	0.9		
	2800	OTTA	24	1148		42	1.8			
	2800	OTTA	26	1230	1238	8	-1.8	-0.9		
	2800	OTTA	25	1430	2350	560	16.2	8.1		
	2800	OTTA	20	1605	1615	35	.9	0.5		
	8800	SGMR	4	1715 U	1719.9	42.1U	64.6	38.8U		
	2695	SGMR	4	1715 U	1720	60.4U	19.2	11.5U		
	2800	OTTA	4	1716	1720	10	51.0	12.8		
	2695	BOUL	45	1716.5	1721	33	49.0	14.0		
	2800	OTTA	29	1726	1726	90	7.4	3.7		
	2800	OTTA	2	2114.5	2115.5	3.5	9.0	5.0		
	2695	BOUL	8	2115.5	2116	3.5	20.0	7.0		
	2800	OTTA	30	2118	2118	55	3.8	1.9		
	2800	OTTA	2	2122.5	2124.6	3	3.8	1.3		
	2695	BOUL	3	2235	2237	4.5	3.0	1.0		
	2695	PENT	24	2350		100 D	16.2			
10	8800	SGMR	4	1236.9	1237.4	6.2	11.8	3.5		
	2800	OTTA	20	1302	1316.5	46	7.4	2.5		
	8800	SGMR	22	1313.9	1323.9	18	6.9	2.0		
	2695	SGMR	22	1315.7	1316.9	19	6.8	2.0		
	2800	OTTA	20	1347	1358	45	1.8	0.9		
	8800	SGMR	4	1438.5	1439.4	2.2	12.7	3.8		
	8800	SGMR	4	1533.7	1536.7	18.2	10.8	3.2		
	2800	OTTA	24	1740	1800	20	1.8	0.9		
	2800	OTTA	24	1800		120 D	1.8			
	2800	OTTA	28	2108	2122	28.5	9.6	4.0		
	2695	BOUL	47	2109.5	2155.5	218 D	2068.0	220.0		
	8800	SGMR	47	2123	2140.3	95 D	3813.0	1143.0U		
	2800	OTTA	47	2126.5	2147	52.5	2520.0	940.0		SPIKE=2673
	2695	SGMR	4	2131.6	2137.3	86.4D	179.0	53.7U		
	8800	MANI	40	2150 E		194.5D		130.0D		SUNRISE
	2695	MANI	40	2150 E		192.7D		464.0D		SUNRISE
	2800	OTTA	30	2219	2219	190 D	245.0			
	2800	OTTA	3	2228.5	2229	1	38.0	19.0		
	2695	PENT	4	2323	2324	2	19.0	9.5		
11	2800	OTTA	20	1327	1345	70	1.2	0.6		
	2800	OTTA	24	1445	1550	15	3.0	1.6		
	2800	OTTA	24	1550		330	3.0			
	2695	PENT	20	1640	1650	20	1.4	0.7		
	2695	SGMR	20	1708	1711.8	15.5	5.5	2.2		
	2800	OTTA	20	1710	1712	18	4.6	1.3		
	2695	BOUL	3	1710.5	1713	5.5	7.0	2.0		
	8800	SGMR	1	1738.8	1739.5	1.9	8.1	3.2		
	2800	OTTA	20	1738	1739.5	16	1.8	0.9		
	2695	SGMR	1	1739.1	1739.6	1.2	3.3	1.3		
	8800	SGMR	3	1834.1	1834.4	4.7	13.5	4.1		
	2695	BOUL	3	1739.5	1740	2.5	2.0	1.0		
	2800	OTTA	27	1845		145	1.4	1.3		
	2800	OTTA	24	1845	1850	5	1.4	0.7		
	2800	OTTA	24	1850		130	1.4			
	2695	SGMR	1	1854	1855.6	2.7	4.6	1.4		
	2800	OTTA	20	1855	1907	25	1.8	0.9		
	8800	SGMR	1	1911.6	1911.9	1	8.1	2.4		
	2695	BOUL	3	1949	1952	7	2.0	1.0		
	2800	OTTA	26	2100	2110	10	-1.4	-0.7		
	2800	OTTA	24	2120	2220	60	2.2	1.1		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

SEPTEMBER 1974

SEP 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	REMARKS
12	8800	SGMR	3	1129.9	1130	.2	13.3	4.0		
	2695	SGMR	3	1130	1130	.3	11.8	3.5		
	8800	SGMR	4	1240	1240.5	7.1	36.3	10.9		
	2800	OTTA	27	1900		245	1.8	1.7		
	2800	OTTA	24	1900	1920	20	1.8	0.9		
	8800	SGMR	20	1903.7	1907.7	15.5	19.6	11.8		
	2695	SGMR	22	1905	1908.9	22.5	8.2	4.9		
	2800	OTTA	2	1904.5	1908	13	8.0	3.0		
	2695	BOUL	3	1905	1908.5	7	9.0	3.0		
	2800	OTTA	24	1920		210	1.8			
	2800	OTTA	20	2030	2048	45	1.4	0.7		
	2695	PENT	26	2250	2305	15	-1.8	-0.9		
13	8800	SGMR	3	1439.3	1440.7	3.7	13.8	4.1		
	2695	SGMR	4	1456.9	1459.9	10.1	61.7	18.5		
	2695	BOUL	45	1457.5	1527	162.5D	211.0	20.0		
	8800	SGMR	4	1458.3	1459.4	8.5	96.1	28.8		
	2800	OTTA	25	1458	2120	262	3.7	1.8		
	2800	OTTA	46	1458	1526	87	390.0	83.0		
	2800	OTTA		1458	1459.5	10	48.0			
	2800	OTTA		1508	1526	29	390.0			
	2800	OTTA		1537	1541.5	8	144.0			
	2800	OTTA		1545	1557	40	170.0			
	8800	SGMR	46	1511.2	1525.9	57.8	127.4	38.2		
	8800	SGMR	46		1557		64.9			
	2695	SGMR	46	1508.9	1525.9	81.1	326.9	98.1		
	2695	SGMR	46		1556.9		151.0			
	2800	OTTA	30	1625	1625	295	24.0	8.0		
	2800	OTTA	1	1626	1628.5	6	3.2	1.6		
	2800	OTTA	24	2120		240 D	3.7			
	2695	PENT	20	2330	2340	35	1.4	0.7		
14	8800	SGMR	1	1228.8	1229.2	.8	5.6	1.7		
	2695	SGMR	1	1228.2	1229.2	1.4	2.1	.6		
	2800	OTTA	20	1900	1906	20	1.4	0.7		
	2800	OTTA	21	1945	1949	20	1.8	0.9		
	2695	BOUL	3	1948.5	1951	6.5	4.0	1.0		
	2800	OTTA	8	1950	1950	.5	1.0	0.5		
	2695	PENT	24	2325	2335	10	1.4	0.7		
	2695	BOUL	3	2334.5	2336.5	3	5.0	2.0		
	2695	PENT	24	2335		80 D	1.4			
	2695	PENT	1	2335	2336	1.5	4.6	1.6		
	2695	PENT	29	2336.5	2336.5	10	.8	0.4		
15	2800	OTTA	1	1242.5	1244	2.5	1.4	0.7		
	2800	OTTA	2	1656	1656.7	1	4.6	2.3		
	2695	BOUL	8	1656.5	1657.5	2.5	15.0	6.0		
	2800	OTTA	8	1829.5	1829.5		1.4			
	2800	OTTA	20	1850	1851	12	1.6	0.8		
	2800	OTTA	23	1950	2011	45	1.8	0.9		
	2695	PENT	1	2009	2010	2	2.2	1.1		
	2800	OTTA	1	2200	2201	2	2.8	1.4		
	2695	BOUL	3	2201	2201.5	1.5	4.0	1.0		
	2800	OTTA	23	2210	2213	37	4.6	2.3		
	2695	BOUL	45	2210.5	2212	10.5	8.0	2.0		
	2800	OTTA	1	2211	2211.5	1	8.8	3.0		
16	2695	MANI	2	0234.3	0234.5	.5	2.8	1.0		
	2800	OTTA	8	1245.8	1246	.5	2.2	1.1		
	2800	OTTA	23	1300	1510	555	14.2	7.4		
	2695	SGMR	20	1302.6	1525.1	327.4	13.5	8.1		
	8800	SGMR	20	1408.7	1531.8	261.3	24.5	14.7		
	2800	OTTA	2	1523	1525	4	5.4	1.8		
	2695	BOUL	8	1524.5	1526	2	5.0	2.0		
	2695	BOUL	8	1740	1745	6.5	5.0	2.0		
	2800	OTTA	1	1742.5	1744	4	4.4	1.1		
	2800	OTTA	8	1846.7	1846.7		1.8			
	2800	OTTA	20	2125	2133	35	1.2	0.7		
17	2800	OTTA	2	1759	1759.5	1	2.0	0.5		
	2800	OTTA	23	1815	2015	275	5.8	2.9		
	2800	OTTA	8	1924.2	1924.2		2.0			
18	8800	SGMR	4	1109.2	1110.1	15.5	56.9	17.1		
	2695	SGMR	4	1108.8	1110.3	35.5	46.3	13.9		
	2800	OTTA	51	1117 E	1117.8	125 D	60.0			
	2800	OTTA	23	1425	1700	385	22.8	8.6		
	2695	SGMR	20	1429.3	1706.4	494.7D	49.0	19.6		
	2800	OTTA	22	1430	1435	30	9.2	3.1		
	8800	SGMR	20	1432.1	1705.7	201.9	25.4	10.2		
	2695	BOUL	21	1433	1435.5	23.5	9.0	3.0		
	2800	OTTA	20	1520	1530	18	4.8	2.4		
	2695	BOUL	45	1642	1707	57	25.0	6.0		
	2800	OTTA	4	1702	1706	11	19.4	8.2		
	2800	OTTA	26	2118	2138	20	-2.8	-1.4		
19	2800	OTTA	20	1440		170	1.8	0.9		
	2800	OTTA	21	2000		140 D	4.6			

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
SEPTEMBER 1974

SEP 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	2800	OTTA	22	2102	2104	10	3.0	1.5		
	2695	BOUL	47	2220.5	2241	134.5D	977.0	177.0		
	2695	PENT	47	2221	2240	51	1880.0	425.0		
	8800	MANI	47	2223.9	2239.6	52.6	3300.0	970.0		
	2695	MANI	47	2223.9	2239.7	62.8	2000.0	620.0		
	2695	PENT	30	2312	2312	130 D	40.0			
	2695	PENT	2	2319	2321	8	3.0	1.7		
	2695	MANI	3	2356	.3	10.6	15.2	9.5		
	2695	PENT	4	2356	2400.5	10	19.2	9.6		
20	2800	OTTA	22	1505	2035	435	3.8	2.0		
21	8800	SGMR	4	1320.4	1321.7	3.8	15.8	4.8		
	2695	SGMR	2	1320.2	1321.9	9	3.5	1.1		
	2800	OTTA	1	1321	1321.5	1	2.0	1.0		
	2800	OTTA	24	1435	1820	215	3.0	1.5		
	8800	SGMR	3	1816	1817.2	4.8	17.9	5.4		
	2800	OTTA	24	1820		300 D	3.0			
	2800	OTTA	20	1840	1932	130	2.2	1.1		
22	2800	OTTA	26	1550	1608	18	-1.6	-0.8		
	2800	OTTA	1	1807	1807.5	2	1.0	0.5		
	2800	OTTA	20	1825	1837	30	1.6	0.9		
	2800	OTTA	24	2145	2224	39	3.8	1.9		
	2695	BOUL	45	2214.5	2220	30.5	7.0	2.0		
	2695	PENT	24	2224		160 D	3.8			
	2695	PENT	2	2227	2230	9	3.8	1.9		
	2695	BOUL	3	2247.5	2253.5	9.5	4.0	1.0		
	2695	PENT	22	2249	2252	13	3.2	1.6		
	8800	MANI	47	2327.3	2340.5	38	2200.0	630.0		
	2695	MANI	47	2326.9	2341.1	34.1	960.0	320.0		
	2695	BOUL	45	2327	2342.5	35	442.0	146.0		
	2695	PENT	47	2327	2341	34	850.0	230.0		
23	8800	MANI	20	0010.4	0013.1	11.5	6.9	3.5		
	2695	PENT	2	0010	0012	7	5.4	3.0		
	2695	MANI	1	0010.2	0012.3	8.5	4.6	1.8		
	2695	BOUL	3	0011.5	0015	6.5	7.0	2.0		
	2800	OTTA	47	1158	1201	62	670.0	37.0		
	2695	SGMR	47	1158.3	1201.2	69.6	566.0	227.0		
	2695	SGMR	47		1229.2		103.2			
	2800	OTTA	29	1300	1300	10	3.3	1.1		
24	8800	MANI	4	0402.7	0403.2	7.5	71.0	17.8		
	2695	MANI	3	0402.5	0403.2	8.7	206.0	47.0		
26	2695	BOUL	3	1755.5	1759	7.5	4.0	1.0		
28	2695	BOUL	1	0012	0012.5	1	3.0	1.0		

Observatories:

BOUL = Boulder MANI = Manila OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill

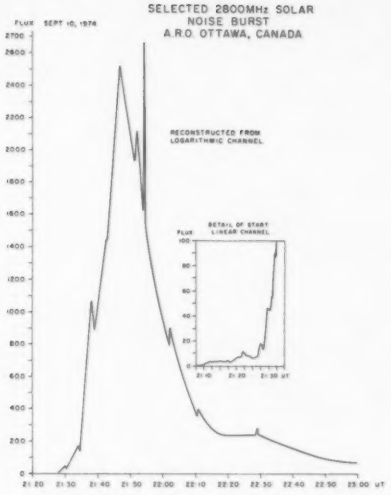
Note: The records from Penticton for September 29 and 30 were not included in preparing the above report, therefore both the Ottawa and Penticton data should be considered provisional for those dates.

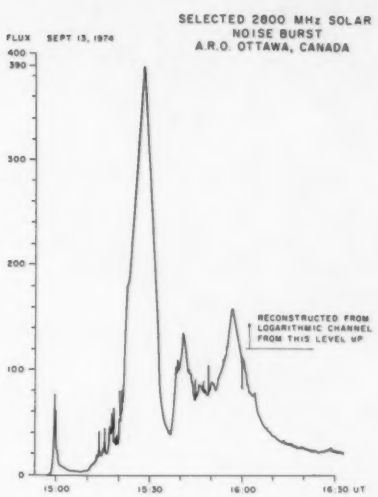
Explanation of Type Code:

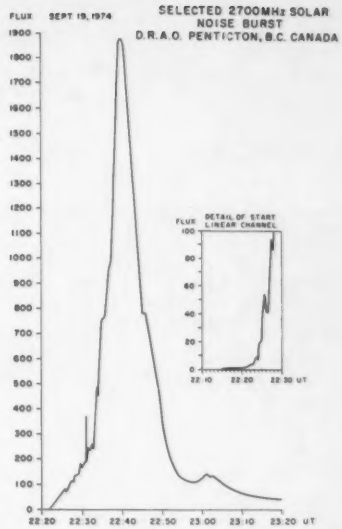
1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
32 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise Storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major
49 Major +

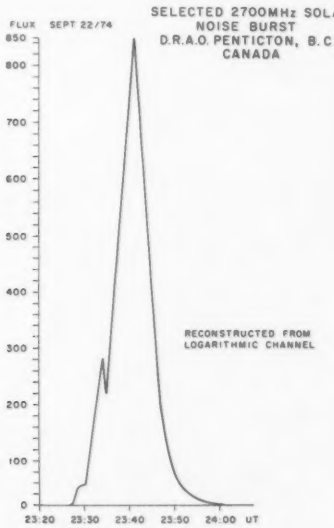
SELECTED SOLAR NOISE BURSTS

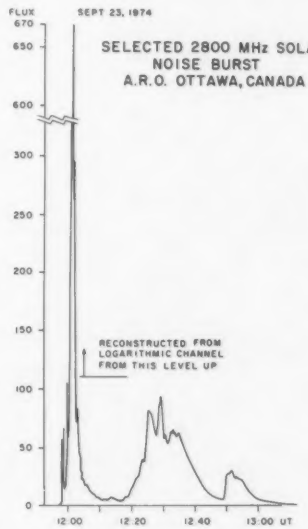
10 - 23 SEPTEMBER 1974











PIONEER VIII

SEPTEMBER 1974

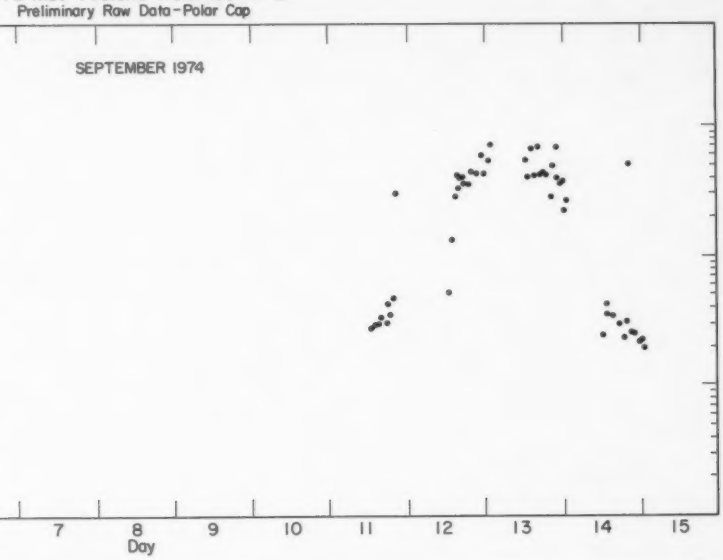
Date Sep. 1974	DSN Coverage (UT)	Data Time (UT)	ESP (°)	SOLAR WIND[1]				IP E-FIELD[2]	IMF[3]		COSMIC RAY PROTONS[4] (particles/sec)	
				U_{H^+} (km/sec)	N_{H^+} (H^+/cc)	T_{H^+} (x10^{6}°K)	TAU (days)	400 Hz (mv)	|B| (γ)	ϕ (°)	>13.9 Mev	>64 Mev
15	2246-2400	2300	136.5	---	---	---	9.9	0.205	3.3	031.	7.67	1.25
		2400		471.	---	0.081		.353	4.1	267.	7.74	1.34
16	0000-0328	0100		---	---	---		.301	3.7	351.	7.87	---
		0200		428.	---	.115		.263	3.8	014.	7.66	---
		0300		428.	---	---		.206	4.5	011.	7.84	---

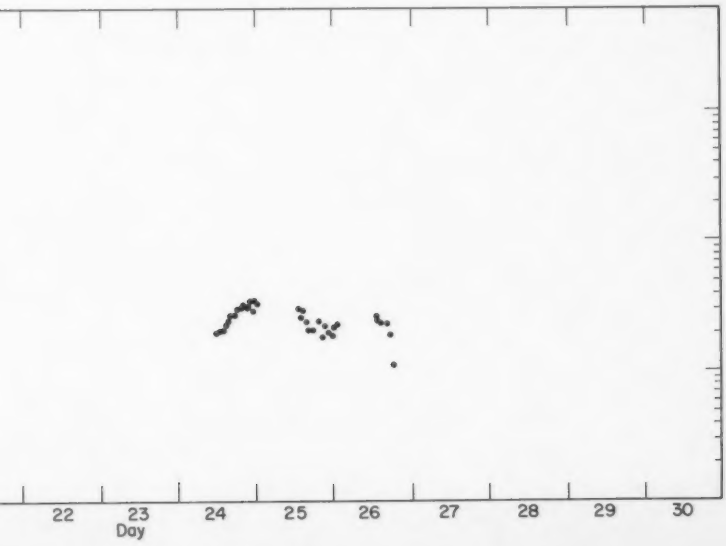
Note: PN-6/9 coverage minimal for September 1974, due to Mariner 10 Mercury encounter and Helios program priorities.

>10
Pr
Particles cm^{-2}sec^{-1}ster^{-1}
10^2
10^1
10^0
10^{-1}
1
2
3
4
5
6
Particles cm^{-2}sec^{-1}ster^{-1}
10^2
10^1
10^0
10^{-1}
16
17
18
19
20
21

10 Mev Protons from NOAA 2

Preliminary Raw Data - Polar Cap

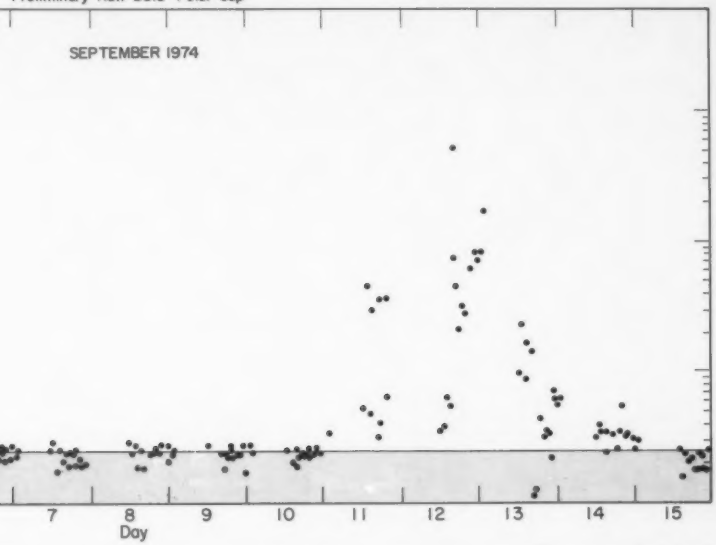


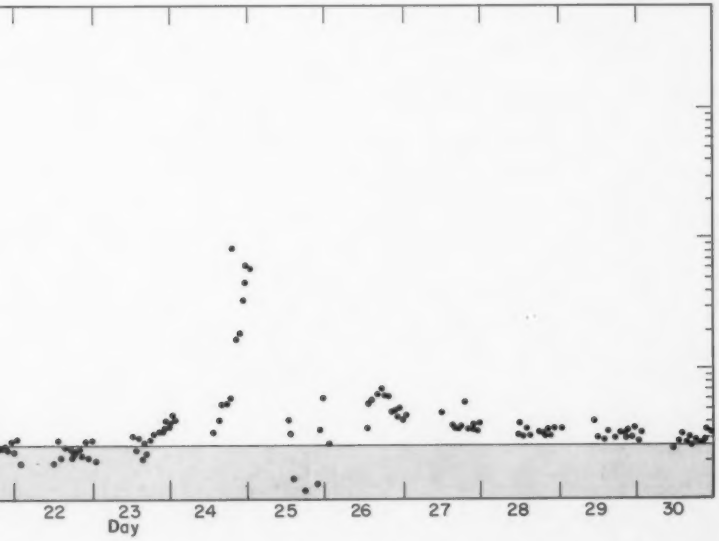


23 Sep 74

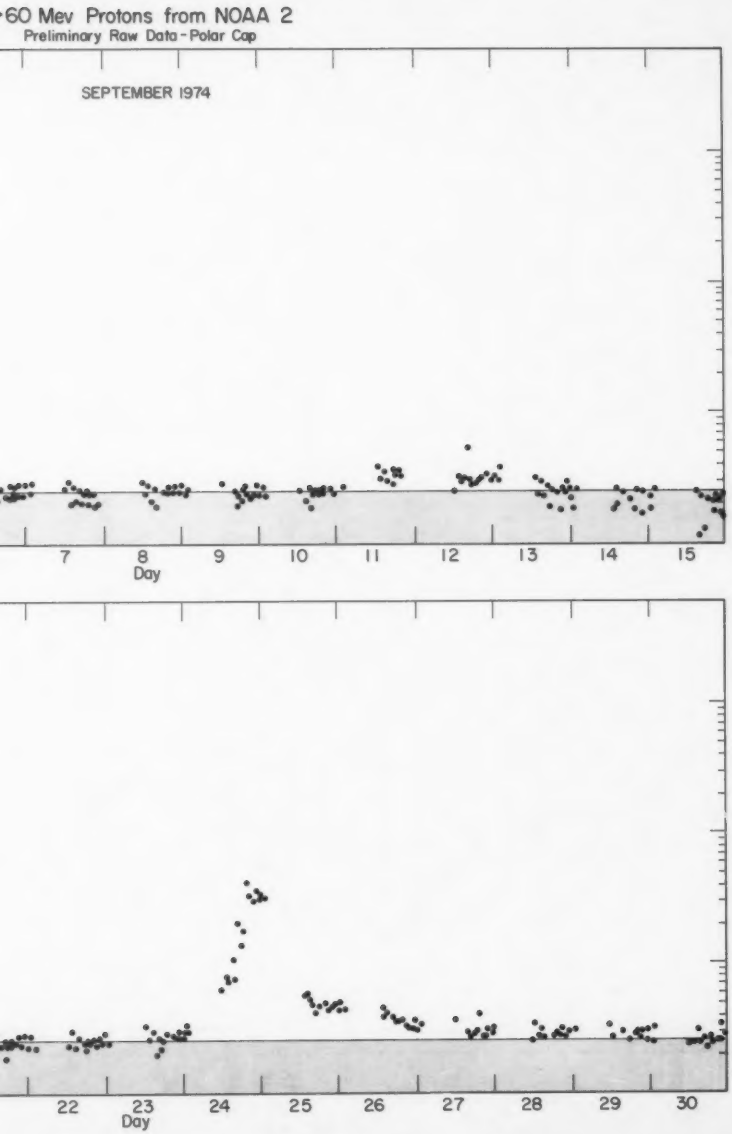
>30 M
Pre
Particles cm^{-2} sec^{-1} ster^{-1}
10^2
10^1
10^0
10^{-1}
1
2
3
4
5
6
Particles cm^{-2} sec^{-1} ster^{-1}
10^2
10^1
10^0
10^{-1}
16
17
18
19
20
21

30 Mev Protons from NOAA 2
Preliminary Raw Data - Polar Cap





>60
Particles cm^{-2} sec^{-1} ster^{-1}
10^2
10^1
10^0
10^{-1}
1
2
3
4
5
6
Particles cm^{-2} sec^{-1} ster^{-1}
10^2
10^1
10^0
10^{-1}
16
17
18
19
20
21


>60 Mev Protons from NOAA 2
Preliminary Raw Data - Polar Cap
SEPTEMBER 1974
7
8
9
10
11
12
13
14
15
Day
22
23
24
25
26
27
28
29
30
Day

25
Sep 74

INFERRED IP MAGNETIC FIELD

BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1893	1971 DEC 20	A	T	A	A	A	A	A	A	A	A	A	A	A	T	T	A	T	A	T	A	–	T	T	T	T	A	T
1894	1972 JAN 16	–	T	T	A	A	A	T	A	A	A	A	T	T	T*	T	T	T	T	AT	T	A	T	T	T	T	T	T
1895	FEB 12	A	A	A	T	A	A	A	A	A	A	A	T	T	T	T	A	T	A	TA	T	A	T	–	A	A	T	T
1896	MAR 10	A	A	A	A	A	A	A	A	A	A	A	T	A	T	A	T	A	T	A	T	A	T	T	A	A	A	A
1897	APR 6	A	A	T	T	T	T	A	A	AT	T	T	T	T	T	T	T	T	T	TA	T	T	T	T	T	T	T	T
1898	MAY 3	A	A	A	A	A	A	T	–	A	A	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
1899	MAY 30	A	A	A	A	A	*	A	A	AT	A*	T	T	T	T	A	A	T	T	T	T	TA	T	A	A	A	–	A
1900	JUN 26	A	A	A	A	A	A	TA	A	TA	A	A	A	A	T	AT	TA	T	T	T	T	T	TA	A	A	T	T	T
1901	JUL 23	TA	A*	TA	A*	T	A*	T	A	A	A	A	A	A	A	T	A*	TA	T	T	A	A	A	A	TA	A	T	T
1902	AUG 19	A	–	A	–	A	A	A	A	A	A	A	A	A	A	TA	T	A	A	A	A	A	A	A	A	T	T	A
1903	SEP 15	A	A	TA	T*	A	A	A	A	A	A	AT	A	A	A	A	T	T	A	AT	A	A	A	A	–	A	–	A
1904	OCT 12	T	T	A	–	TA	–	A	A*	A	T	A	T	TA	T	A	A	A	A	A	A	TA	TA	A	AT	A	A	A
1905	NOV 8	A	A	T	A	AT	A	AT	AT	TA	AT	T	AT	A	T	TA	T*	A	A	A	A	A	A*	TA	AT	A	A	A
1906	DEC 5	T	T	T	T	TA	AT	T	–	T	–	T	T	T	T	A	AT	A	–	TA	T	TA	T	A	A	T	T	T
1907	1973 JAN 1	T	T	T	T	T	T	T	T	TA	T	T	T	A	T	AT	–	A	AT	A	T	A	–	AT	–	A	TA	A
1908	JAN 28	T	T	A	A	T	T	TA	T	AT	T	T	T	T	A	T	A	A	A	TA	A	A	A	A	A	A	AT	T	T
1909	FEB 24	AT	T	AT	T	AT	TA	AT	T	T	T	T	–	AT	TA	AT	A	T	A	T	T	A	A	A	A	A	A	A	A
1910	MAR 23	T	T	T	T	T	T	T	A	T	T	T	T	T	T	TA	AT	A	T	TA	A	A	A	A	A	–	A	A
1911	APR 19	T	T	T	AT	T	T-	A	T	T	T	AT	T	A	A	AT	T	T	T	TA	A	A	A	A	AT	A*	A	A
1912	MAY 16	T	T	T	T	T	T	T	T	AT	T	–	T	–	TA	T	T	A	A	T	AT	AT	T	T	AT	A	A	A
1913	JUN 12	TA	T*	–	T	*	–	T	T	TA	T*	A	A	T	T	–	T*	T	T*	T	T	T	T	AT	AT	A	A	A
1914	JUL 9	T	T	T	T	A	A	T	T	–	T	AT	A	T	T*	A	T*	–	A	A	AT	*	–	A	A	T	T	A
1915	AUG 5	T	T	A	A	A	A	T	AT	A	A	A	T	T	T	*	T	T	AT	*	T	AT	T	T	A	AT	T	A
1916	SEP 1	T	TA	*	T	T	T	T	A	AT	A	A	TA	*	A	A	A	*	T	T	T	T	T	T	T	A	A	A
1917	SEP 28	A	A	*	TA	A	T	AT	T	T	A	A	A	A	A	A	T	A	AT	A	*	AT	*	AT	AT	T	T	T
1918	OCT 25	T	T	T	T	A	TA	A	A	A	T	A	T	*	T	A	T	A	A	A	A	A	A	A	A	T	T	T
1919	NOV 21	A	*	T	T	T	–	A	A	A	A	AT	T	A	T	A	T	*	A	TA	A	A	A	A	A	A	T	T
1920	DEC 18	T	T	AT	A	A	T	A	T	A	TA	A	T	A	*	A	A	A	*	AT	T	T	T	T	T	T	T	T
1921	1974 JAN 14	T	A	A	T	–	T	T	A	A	T	A	A	A	A	A	A	–	A	A	–	AT	–	T	T	T	TA	T
1922	FEB 10	A	–	A	–	A	*	A	A	A	A	A	A	A	A	TA	T	A	A	A	A	T	*	T	T	T	T	T
1923	MAR 9	A	A	A	A	A	A	A	A	A	A	A	A	A	T	T	TA	TA	A	AT	A	A	A	A	A	T	A	T
1924	APR 5	A	A	A	A	A	–	TA	A	A	A	A	A	A	A	*	A	A	A	A	A	A	A	A	A	T	T	TA
1925	MAY 2	–	–	A	A	A	A*	AT	T	A	AT	AT	T	A	T*	TA	A	A	A	TA	T*	A	A*	AT	AT	T	T	T
1926	MAY 29	T	T	A	A	A	*	–	A	A	A	A	*	A	A	*	-	TA	*	A	A	A	A	T	T	T	TA	TA
1927	JUN 25	TA	TA	A	A	–	A	–	A	A	T	A	A	A	A	A	A	A	A	A	–	TA	TA	–	T	T	T	T
1928	JUL 22	T	T	A	A	A	A	AT	A	A	A	A	A	A	A	A	A	A	A	A	A	–	–	–	–	–	–	–
1929	AUG 18	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	A	T	T	T	T	T	T	T	T	–	T
1930	SEP 14	–	T	–	TA	AT	A*	A	A	–	A	A	A	A	A	TA	A	AT	A	A	A	AT	T	–	TA	A	T	TA

T = towards the sun
A = away from the sun
* = effect doubtful or not discernable
– = missing data

The table shows daily inferences of the polarity of the interplanetary magnetic field. The first half of the day is based principally on magnetograms produced by the magnetometer at the Vostok Anarctic Station of the USSR. The magnetometer of the U.S. Air Weather Service operated by the Air Force Cambridge Research Laboratories at the Thule Geopole Station is used for the second half of the day.

Note: Computer problems are responsible for the considerable amount of missing data in August 1974.

SOLAR PROTON EVENTS
(PROVISIONAL)
SEPTEMBER 1974

11/0700 UT	Absorption began on Thule 30 MHz riometer.
13/1700	Maximum absorption on Thule 30 MHz riometer (3.0 dB).
13/2100	SMS-1 Proton Flux: 6-10 Mev detector - 120 protons $cm^{-2}sec^{-1}ster^{-1}$ 18-38 Mev detector - 20 protons $cm^{-2}sec^{-1}ster^{-1}$
14/1600	SMS-1 Proton Flux (18-38 Mev detector) at background.
15/1700	Thule 30 MHz absorption ended.
16/2400	SMS-1 Proton Flux (6-10 Mev detector) at background.
20/0040 UT	Flux increase began on SMS-1 6-10 and 18-38 Mev detectors.
20/0430	Absorption began on Thule 30 MHz riometer.
20/0700	Maximum flux on SMS-1 18-38 Mev detector (24 protons $cm^{-2}sec^{-1}ster^{-1}$)
20/0800	Maximum flux on SMS-1 6-10 Mev detector (180 protons $cm^{-2}sec^{-1}ster^{-1}$)
20/1515	Maximum absorption on Thule 30 MHz riometer (2.7 dB).
21/0000	Flux at background on SMS-1 18-38 Mev detector
21/1915	Absorption ended on Thule 30 MHz riometer.
22/0000	Flux at background on SMS-1 6-10 Mev detector.

AUGUST 1974 DATA

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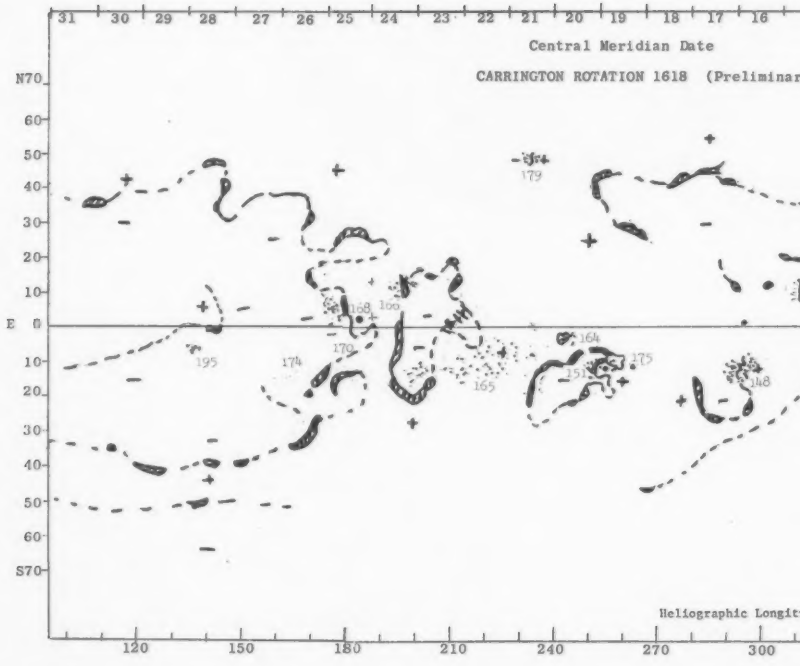
For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

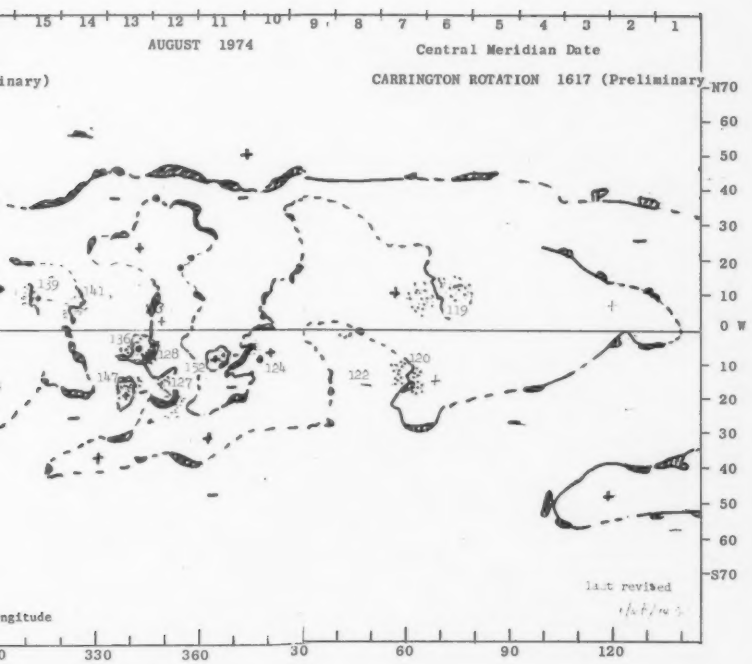
Hα SYNOPTIC C

AUGUST 197



C CHART

1974



31
Aug 74

AUGUST 1, 1974 (P = 10.

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-8

McMATH-HULBER

Np

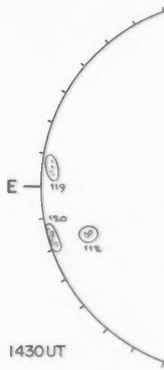
E

NO DATA

W

Sp

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}



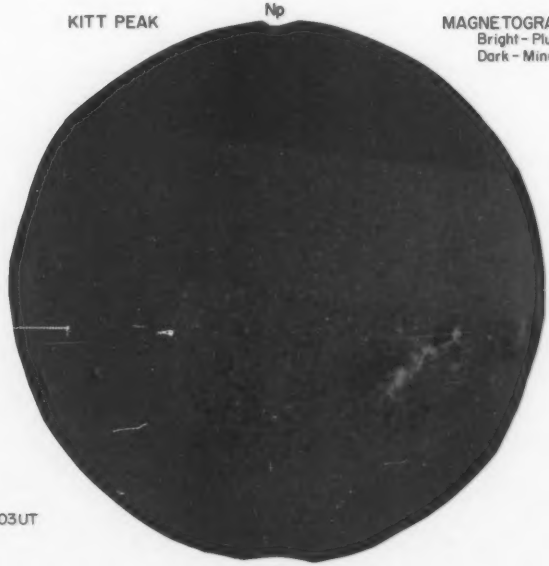
1430UT

KITT PEAK

Np

MAGNETOGRA
Bright - Plu
Dark - Min

E



1603UT

Sp

10.69, B_o = 5.78, L_o = 144.80)

32
Aug 74

LBERT CALCIUM REPORT

GOOD	M
95 - 1500	- 3.0
01 - 2800	- 2.5
12 - 0300	- 2.5

OGRAM
- Plus
- Minus

MT. WILSON

DELTAY=
DELTAX=

Np

MAGNETOGRAM
Solid - Plus
Dotted - Minus

W E

NO DATA

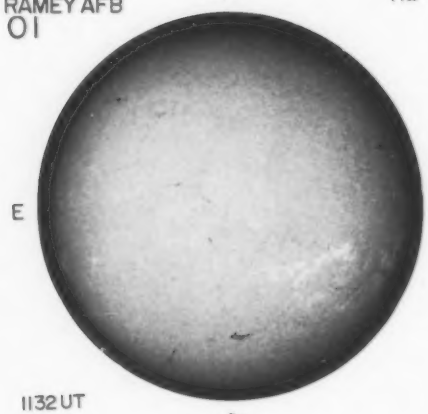
W

Levels
± 5
± 10
± 20
± 40
± 80

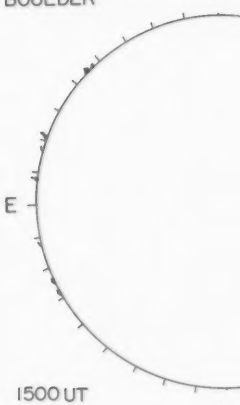
Sp

RAMEY AFB

01



BOULDER



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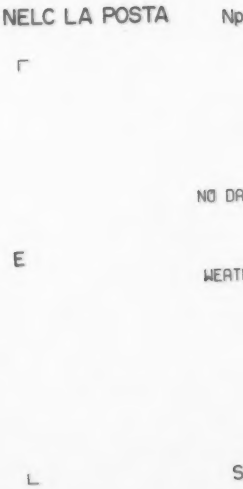
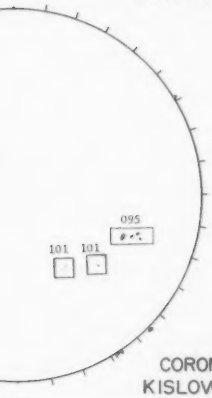


Np

SUNSPOTS



CORONA
KISLOVODSK

Sp

Np

2.0 CM

DATA

W

EATHER

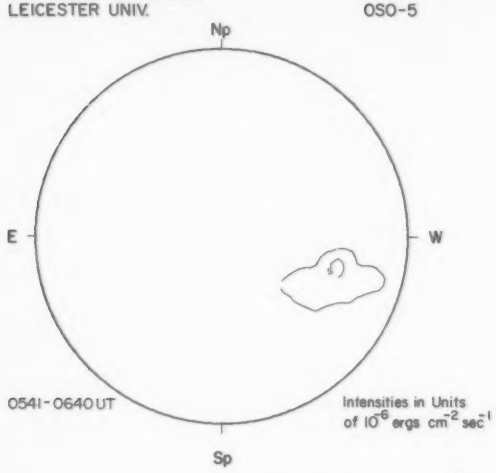
Sp

ANT. TEMP. UNIT 100° K

33
Aug 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

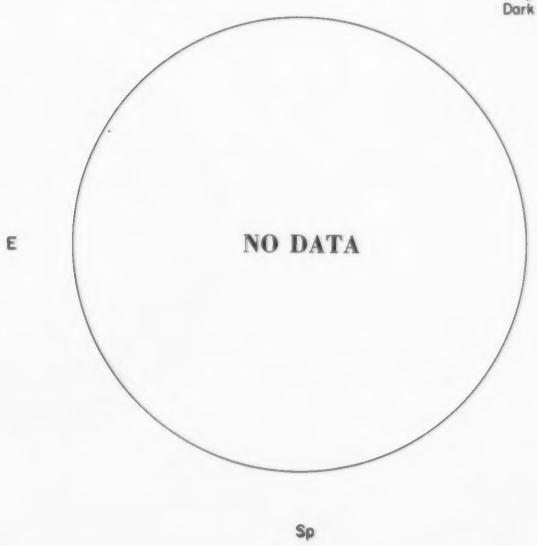
X-RAY
OSO-5



KITT PEAK

McMATH-HULBE

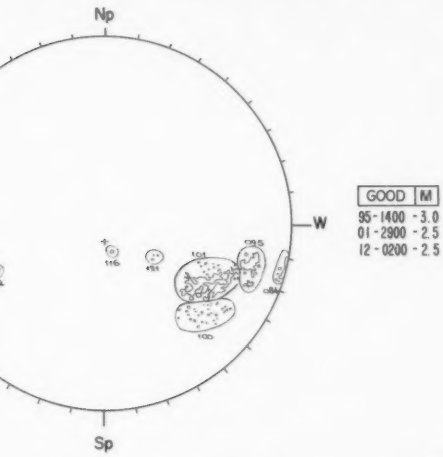
MAGNETOGR
Bright - P
Dark - Mi



11.09, $B_o = 5.85$, $L_o = 131.57$)

34
Aug 74

ILBERT CALCIUM REPORT



GOOD	M
95-1400	-3.0
01-2900	-2.5
12-0200	-2.5

TOGRAM
ht - Plus
- Minus

MT. WILSON

DELTAY=
DELTAX=

Np

MAGNETOGRAM
Solid - Plus
Dotted - Minus

W E

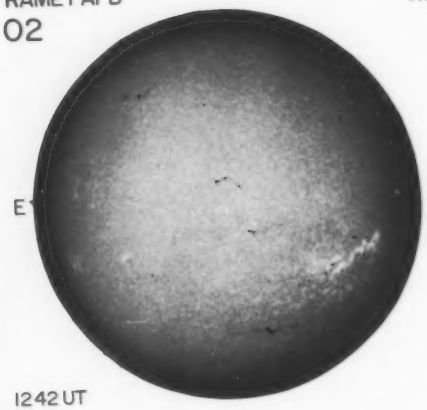
NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

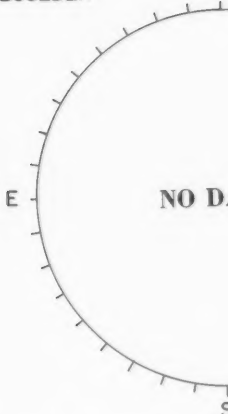
Sp

RAMEY AFB
02

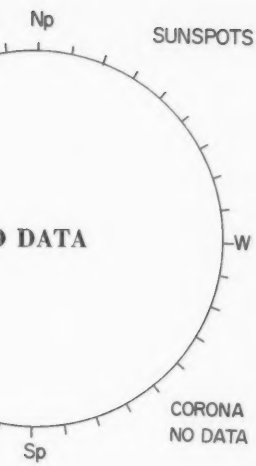


1242 UT

BOULDER



NELC LA POSTA



Np

2.0 CM

NO DATA

WEATHER

W

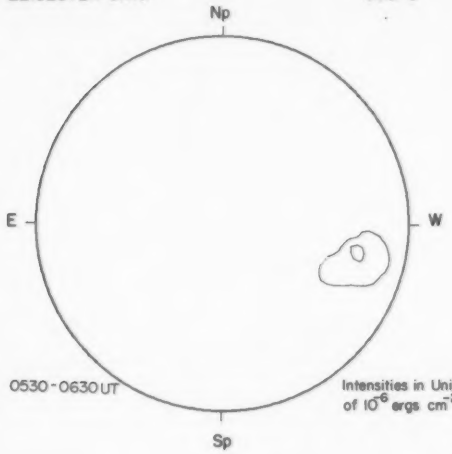
Sp

ANT. TEMP. UNIT 100° K

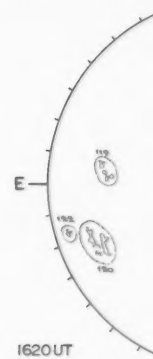
35
Aug 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5



McMATH-HULB



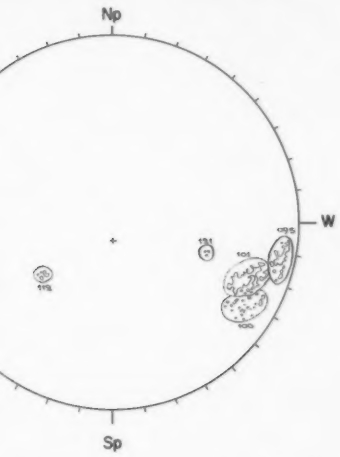
KITT PEAK

MAGNETOG
Bright-
Dark-M

(P = 11.48, B_o = 5.93, L_o = 118.35)

36
Aug 74

ULBERT CALCIUM REPORT



GOOD	M
95 - 1700	- 3.0
01 - 2800	- 2.5
20 - 1100	- 2.5

TOGRAM
ght - Plus
k - Minus

MT. WILSON

DELTAY =
DELTAX =

Np

MAGNETOGRAM
Solid - Plus
Dotted - Minus

W E

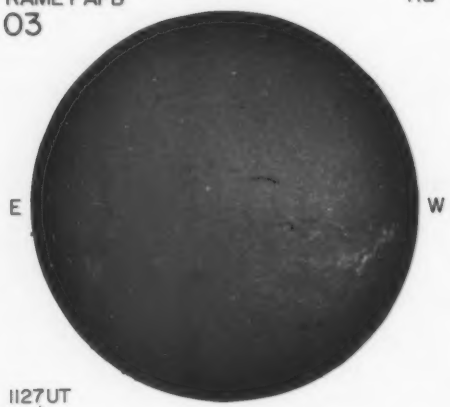
NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

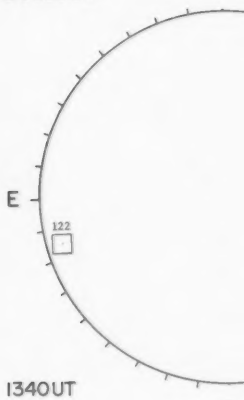
Sp

RAMEY AFB
03



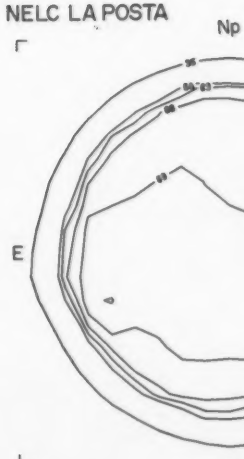
1127UT

BOULDER

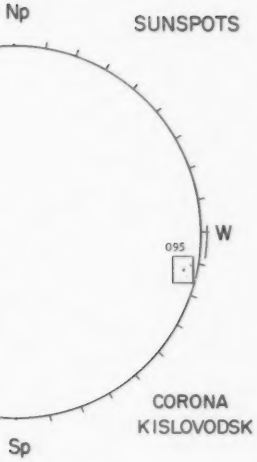


1340UT

NELC LA POSTA



2112UT

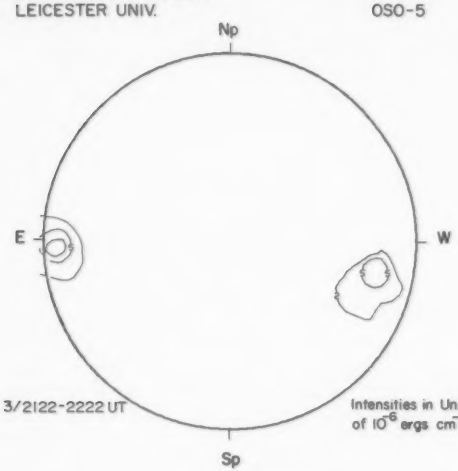

Np
SUNSPOTS
W
095
CORONA
KISLOVODSK
Sp

Np
2.0CM
W
Sp
ANT. TEMP. UNIT 100° K

37
Aug 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5



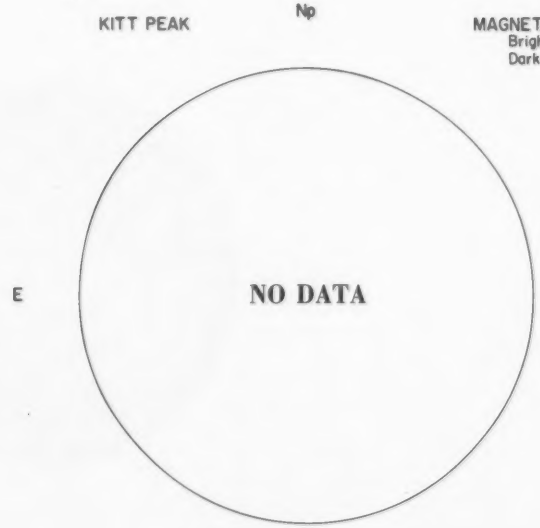
3/2122-2222 UT

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULL

1135 UT

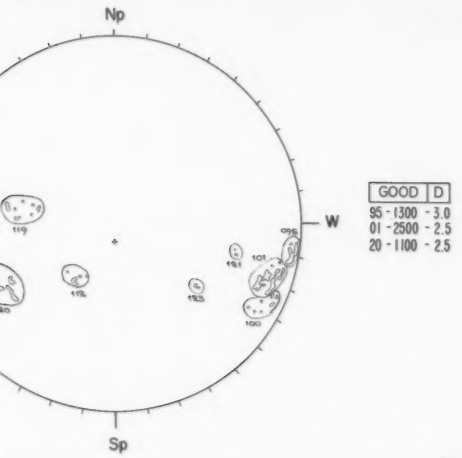
KITT PEAK



MAGNETO
Bright-
Dark-

11.87, $B_o = 5.99$, $L_o = 105.12$)

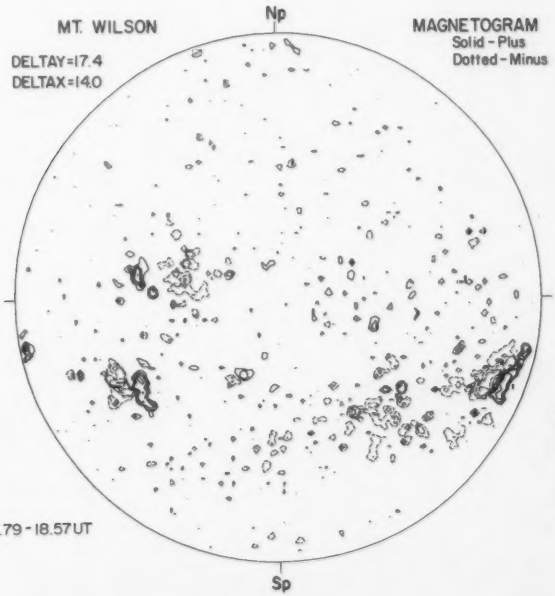
ULBERT CALCIUM REPORT



GOOD	D
95 - 1300	- 3.0
01 - 2500	- 2.5
20 - 1100	- 2.5

ETOGRAM
ight - Plus
rk - Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0

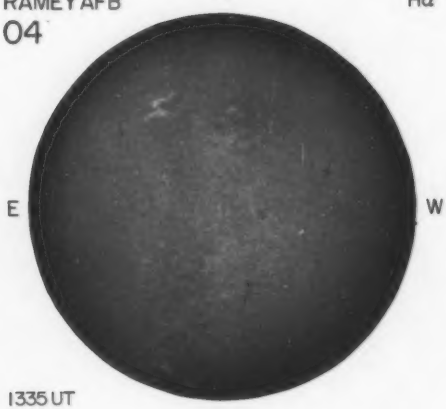


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
±5
±10
±20
±40
±80

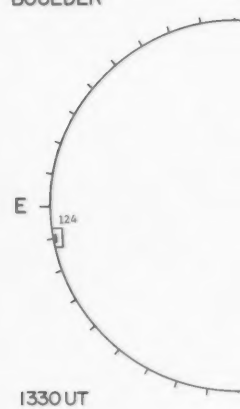
16.79 - 18.57 UT

RAMEY AFB
04



1335 UT

BOULDER



1330 UT

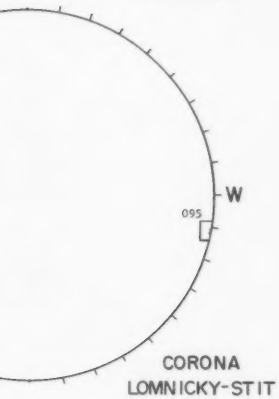
NELC LA POSTA

E

1819 UT

Np

SUNSPOTS



CORONA
LOMNICKY-STIT

Sp

2.0 CM

Np

NO DATA

CLOUDY

W

Sp

ANT. TEMP. UNIT 100° K

39
Aug 74

AUGUST 5, 1974 (P = 12

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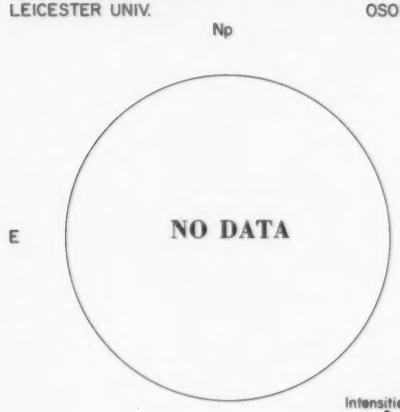
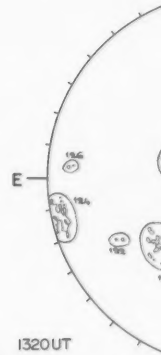
LEICESTER UNIV.

X-RAY
OSO-5



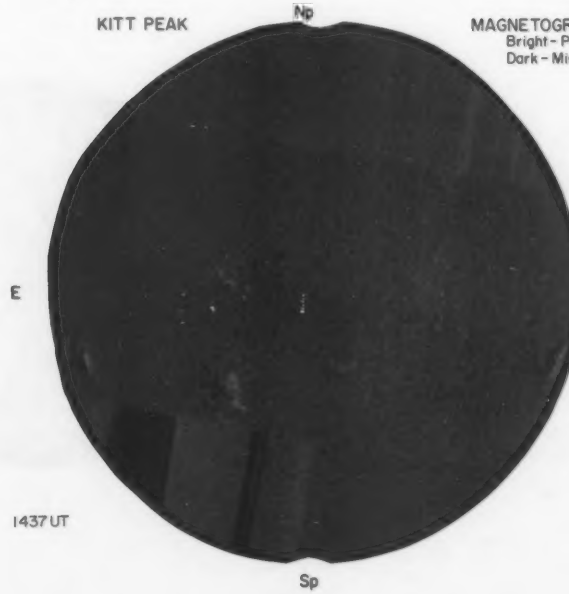
Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBE



1320UT

KITT PEAK



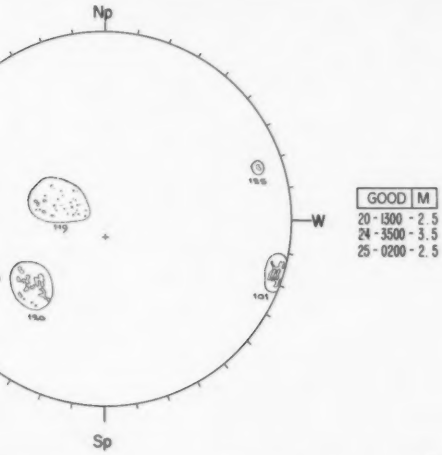
1437UT

MAGNETOGR
Bright - P
Dark - Mi

= 12.26, B_o = 6.06, L_o = 91.90)

40
Aug 74

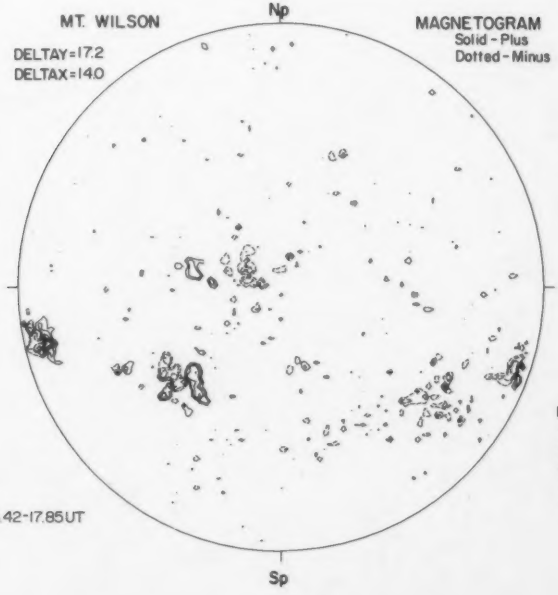
ILBERT CALCIUM REPORT



GOOD	M
20 - 1300	- 2.5
24 - 3500	- 3.5
25 - 0200	- 2.5

TOGRAM
nt - Plus
- Minus

MT. WILSON
DELTAY=17.2
DELTAX=14.0

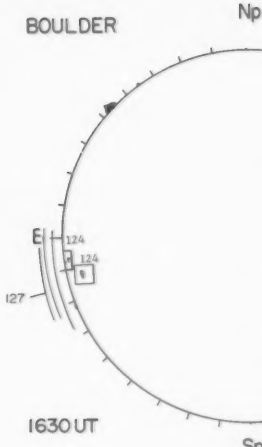


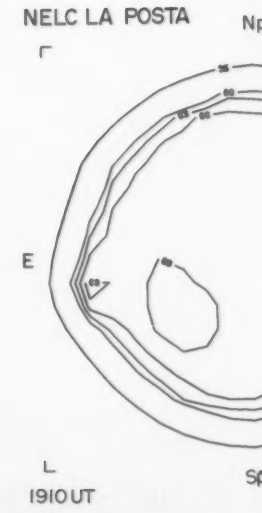
MAGNETOGRAM
Solid - Plus
Dotted - Minus

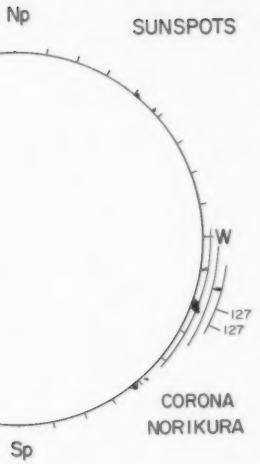
Levels
± 5
± 10
± 20
± 40
± 80

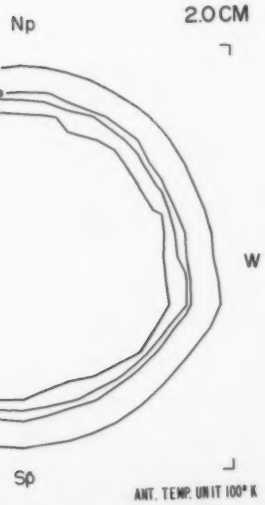
16.42-17.85 UT

BOULDER
05
Np
Hα
E
NO DATA
W
Sp


BOULDER
Np
E
124
124
127
1630 UT
Sp


NELC LA POSTA
Np
E
L
1910 UT

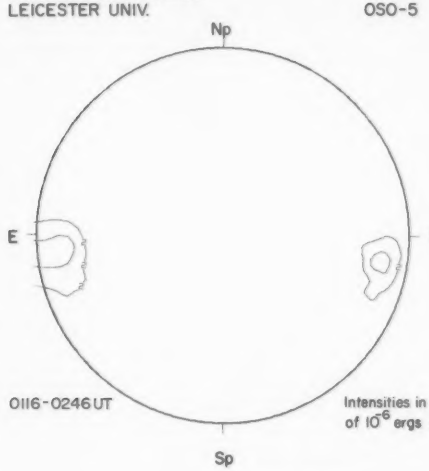

Np
SUNSPOTS
W
127
127
CORONA
NORIKURA
Sp


Np
2.0 CM
W
Sp
ANT. TEMP. UNIT 100° K

AUGUST 6, 1974 (P = 12.

UNIV. COLLEGE LONDON
LEICESTER UNIV.

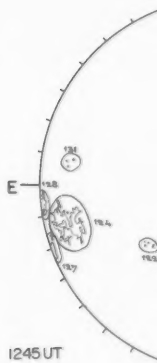
X-RAY
OSO-5



0116-0246 UT

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBE



1245 UT

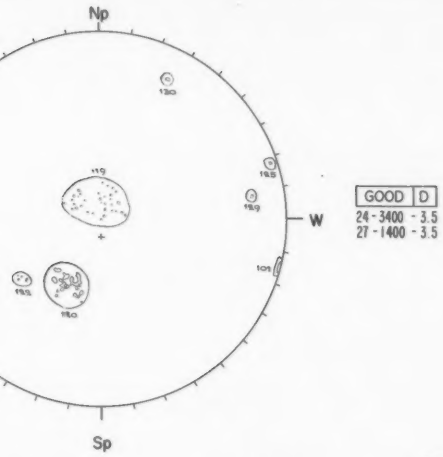
KITT PEAK

Np

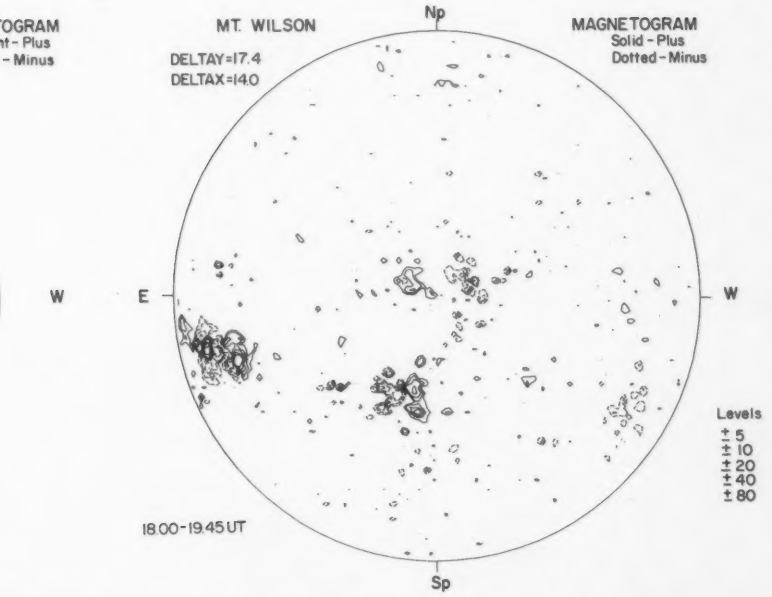
MAGNETOGR
Bright - P
Dark - Mi

12.64, B_o = 6.13, L_o = 78.67)

LBERT CALCIUM REPORT



TOGRAM
nt - Plus
- Minus



RAMEY AFB

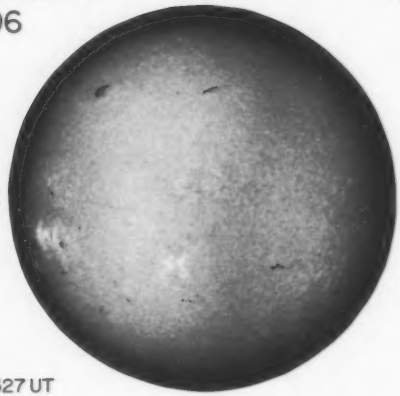
06

Np

Hα

E

W



1327 UT

Sp

BOULDER

Np

E

124

124

120

127

1510 UT

Sp

NELC LA POSTA

Np

NO D

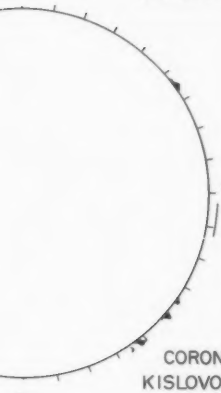
E

EQUIP

Sp

Np

SUNSPOTS



CORONA
KISLOVODSK

Sp

2.0 CM

Np

0 DATA

UIPMENT

W

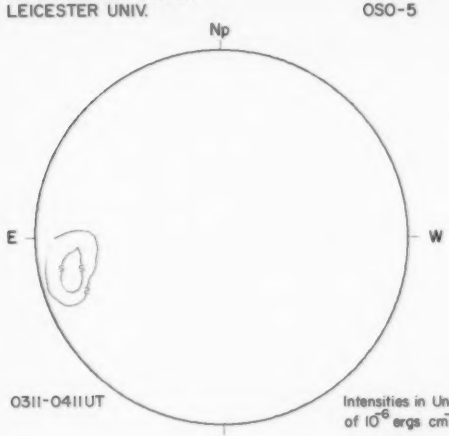
Sp

ANT. TEMP. UNIT 100°K

43
Aug 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5



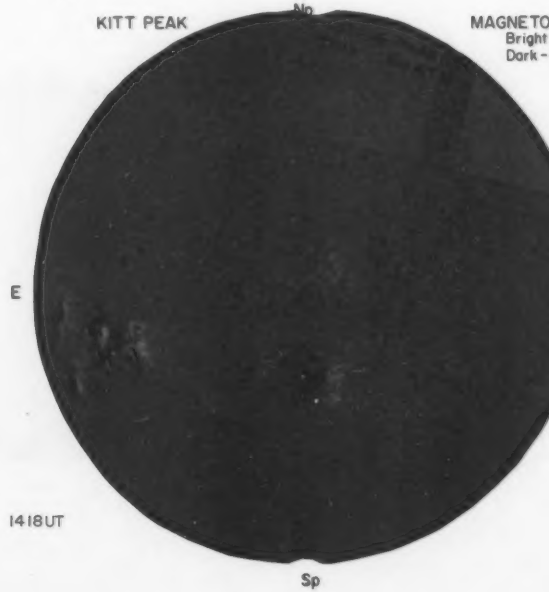
0311-0411UT

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HUL

1330UT

KITT PEAK



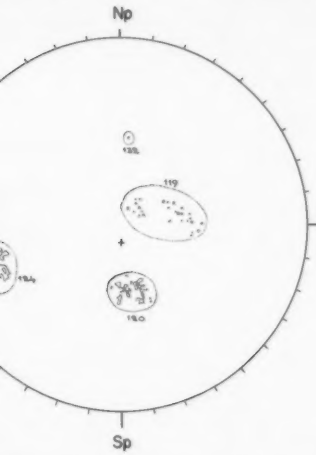
1418UT

MAGNETO
Bright
Dark-

= 13.02, B_o = 6.19, L_o = 65.45)

HULBERT CALCIUM REPORT

44
Aug 74

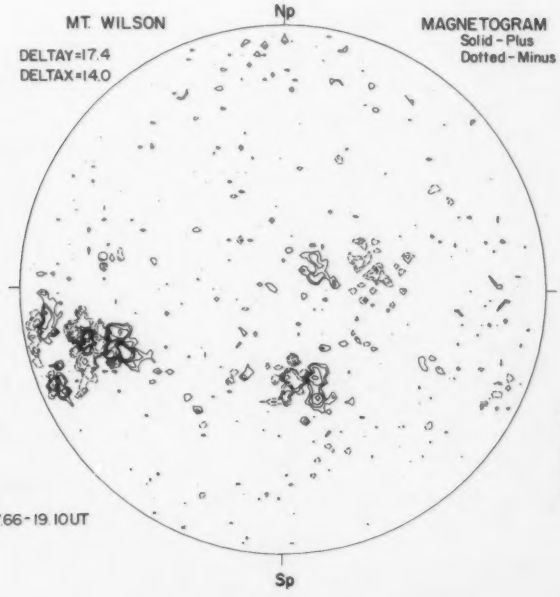


GOOD	M
24 - 3500	- 3.0
27 - 1600	- 3.0
28 - 1700	- 2.5

ETOGRAM
right - Plus
ark - Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0

MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
±5
±10
±20
±40
±80

17.66 - 19.10 UT

RAMEY AFB
07

Np

Hα

E

W

1222 UT

Sp

BOULDER

Np

E

1505 UT

Sp

NELC LA POSTA

Np

NO DA

E

EQUIP

Sp

Np

SUNSPOTS

CORONA
NO DATA

Sp

Np

2.0 CM

DATA

UIPMENT

W

Sp

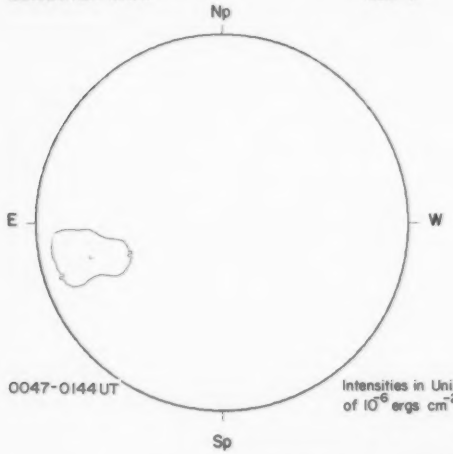
ANT. TEMP. UNIT 100°K

45
Aug 74

AUGUST 8, 1974 (P = 13

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5



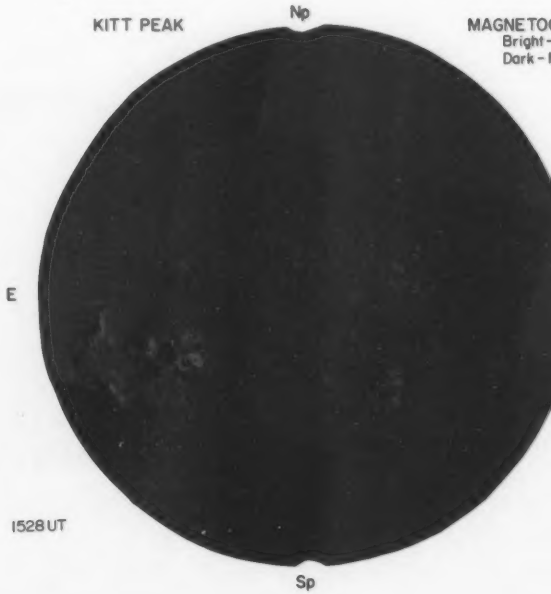
0047-0144 UT

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULB

1615 UT

KITT PEAK



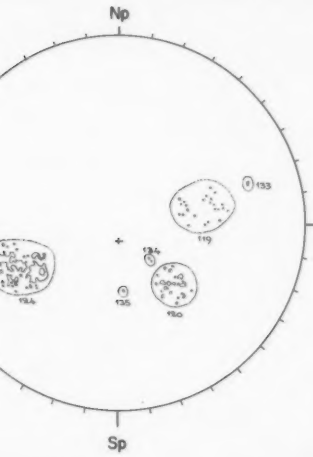
1528 UT

MAGNETO
Bright-
Dark-

= 13.39, B_o = 6.25, L_o = 52.23)

HULBERT CALCIUM REPORT

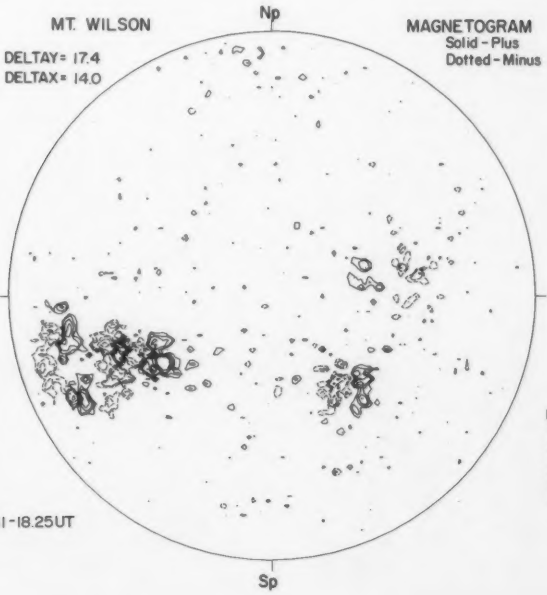
46
Aug 74



GOOD	M
24 - 3100	- 3.0
27 - 1300	- 3.0
28 - 1400	- 2.5

ETOGRAM
ight - Plus
rk - Minus

MT. WILSON
DELTAY = 17.4
DELTAX = 14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

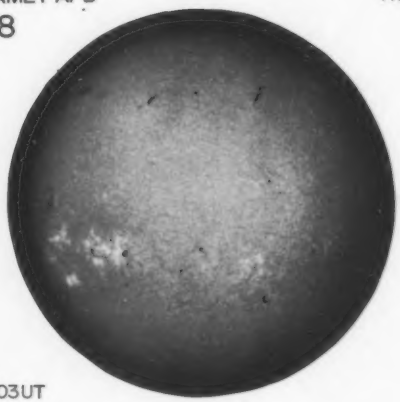
16.81 - 18.25 UT

RAMEY AFB

08

Np

Hα



E

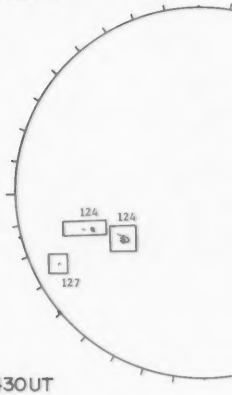
W

1103UT

Sp

BOULDER

Np



E

1430UT

Sp

NELC LA POSTA

Np

NO DAT

E

EQUIPME

Sp

Np

SUNSPOTS

CORONA
LOMNICKY-STIT

Sp

Np

2.0 CM

DATA

IPMENT

W

Sp

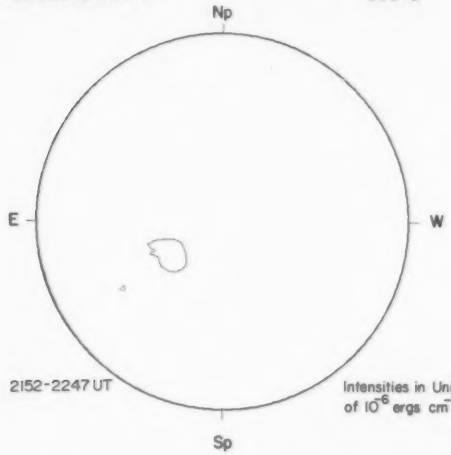
ANT. TEMP. UNIT 100° K

47
Aug 74

AUGUST 9, 1974 (P = 1

UNIV. COLLEGE LONDON
LEICESTER UNIV.

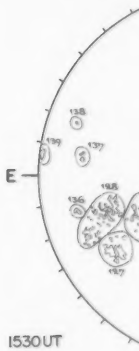
X-RAY
OSO-5



2152-2247 UT

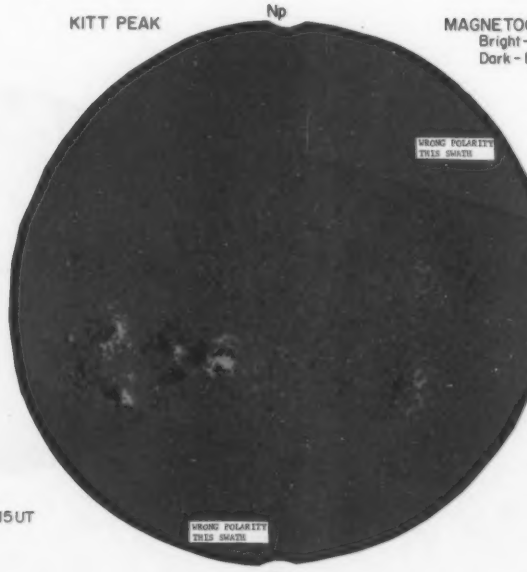
Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HUL



1530 UT

KITT PEAK



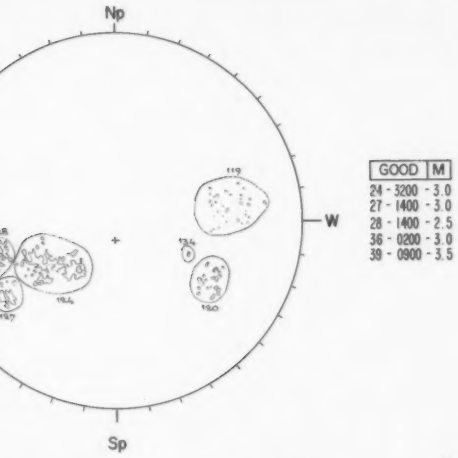
1415 UT

MAGNETO
Bright-
Dark-

= 13.76, B_o = 6.31, L_o = 39.01)

48
Aug 74

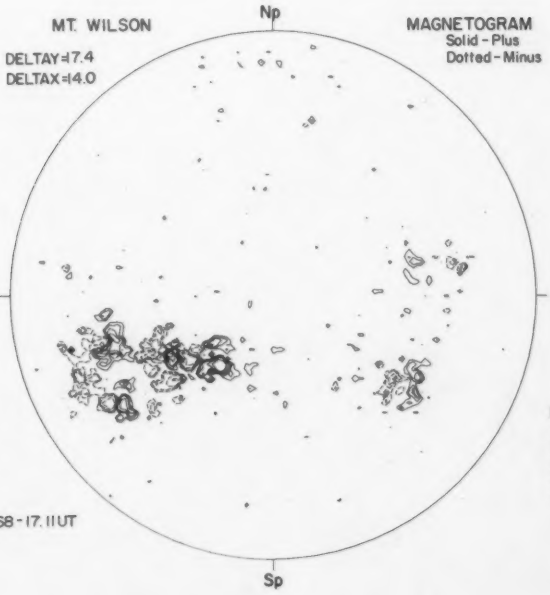
ULBERT CALCIUM REPORT



GOOD	M
24 - 3200	- 3.0
27 - 1400	- 3.0
28 - 1400	- 2.5
36 - 0200	- 3.0
39 - 0900	- 3.5

ETOGRAM
ight - Plus
rk - Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

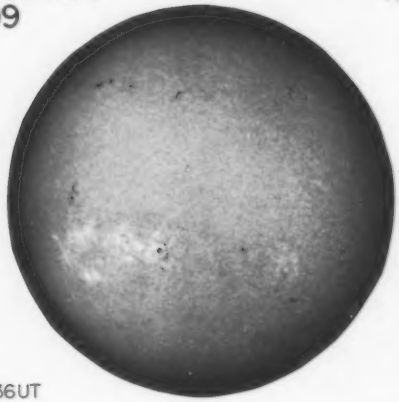
Levels
± 5
± 10
± 20
± 40
± 80

15.68 - 17.11 UT

RAMEY AFB
09

Np

Hα



E

W

1136UT

Sp

BOULDER

Np

E

1300UT

Sp

NELC LA POSTA

Np

NO DATA

E

EQUIPME

Sp

Np

SUNSPOTS

CORONA
NO DATA

Sp

p

2.0CM

DATA

PMENT

W

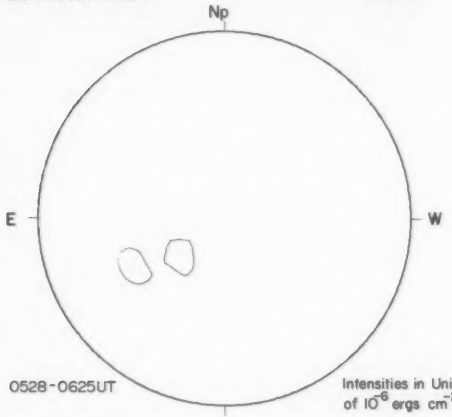
p

ANT. TEMP. UNIT 100° K

49
Aug 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

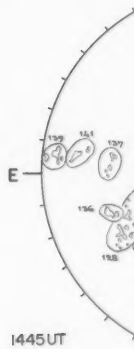
X-RAY
OSO-5



0528-0625UT

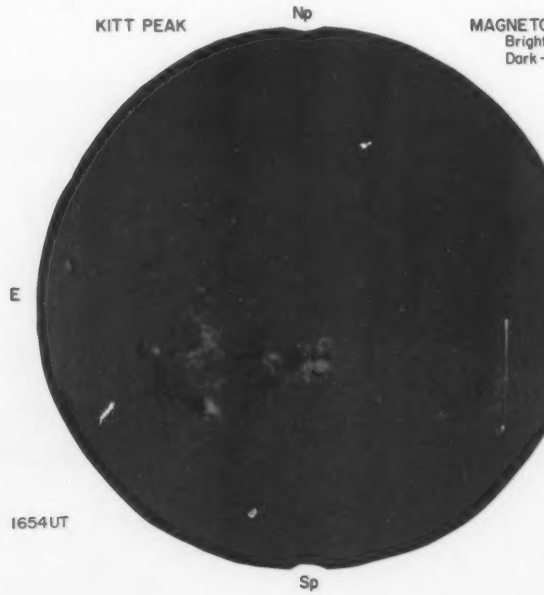
Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HUL



1445UT

KITT PEAK



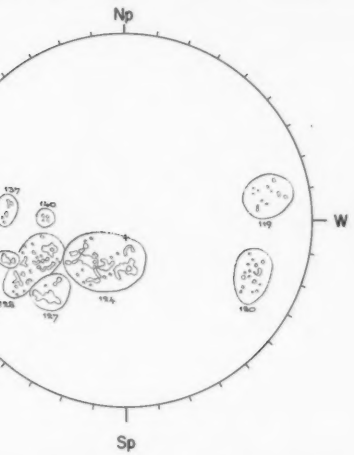
1654UT

MAGNET
Bright
Dark

= 14.13, B_o = 6.37, L_o = 25.79)

50
Aug 74

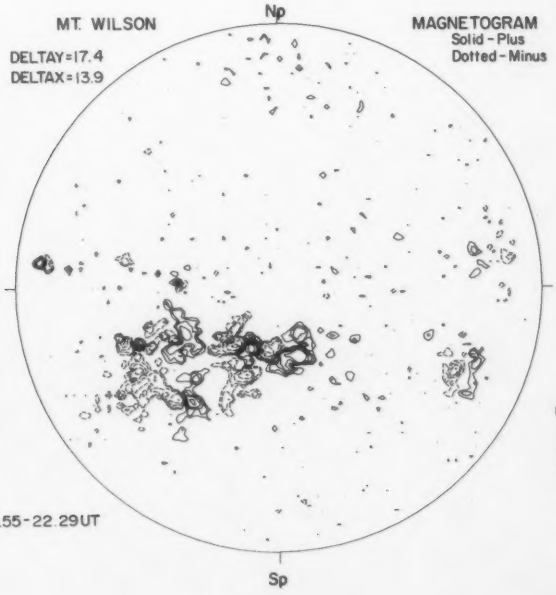
HULBERT CALCIUM REPORT



GOOD	S
24 - 3200	- 3.5
27 - 1200	- 3.0
28 - 1900	- 2.5
36 - 0400	- 3.0
39 - 1000	- 3.0
40 - 0200	- 2.5

NETOGRAM
bright - Plus
bark - Minus

MT. WILSON
DELTAY=17.4
DELTAX=13.9



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

21.55-22.29UT

RAMEY AFB

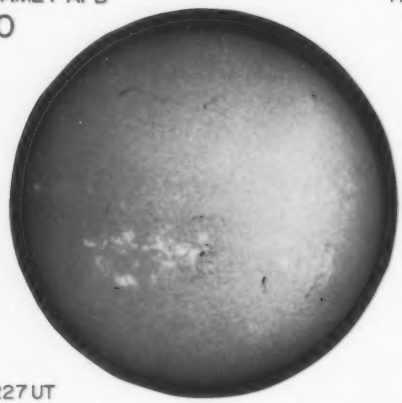
10

Np

Hα

E

W



1227 UT

Sp

BOULDER

Np

E

139

136

124

124

1420 UT

Sp

NELC LA POSTA

Np

NØ DA

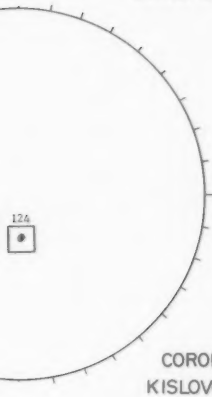
E

EQUIP

Sp

Np

SUNSPOTS



CORONA
KISLOVODSK

Sp

Np

2.0CM

DATA

UIPMENT

W

Sp

ANT. TEMP. UNIT 100° K

51
Aug 74

AUGUST 11, 1974 (P= 14

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

E

NO DATA

W

Sp

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

CATANIA

0648 UT

KITT PEAK

Np

E

NO DATA

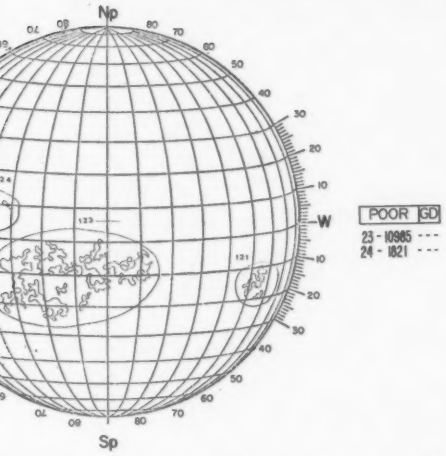
Sp

MAGNETOG
Bright -
Dark - M

= 14.49, B_o = 6.43, L_o = 12.56)

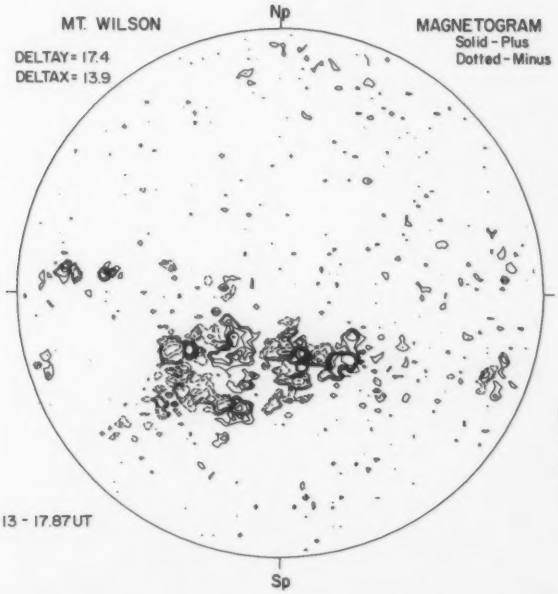
52
Aug 74

CALCIUM REPORT



TOGRAM
ght - Plus
k - Minus

MT. WILSON
DELTAY = 17.4
DELTAX = 13.9



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

17.13 - 17.87 UT

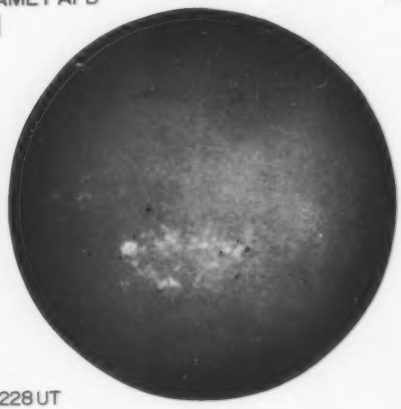
RAMEY AFB

Np

Hα

E

W



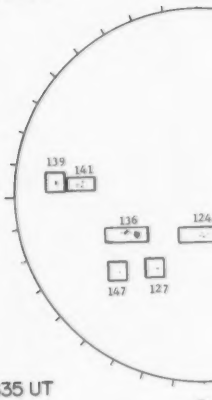
1228 UT

Sp

BOULDER

Np

E



1635 UT

Sp

NELC LA POSTA

Np

NØ D

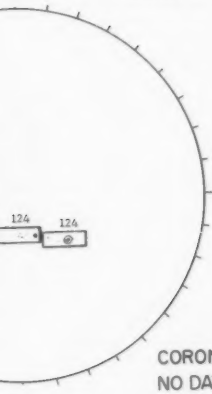
E

EQUIP

Sp

Np

SUNSPOTS



CORONA
NO DATA

Sp

2.0 CM

Np

0 DATA

QUIPMENT

W

Sp

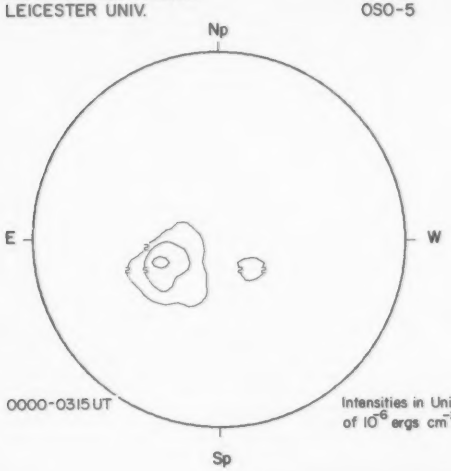
ANT. TEMP. UNIT 100° K

53
Aug 74

AUGUST 12, 1974 (P = 14

UNIV. COLLEGE LONDON
LEICESTER UNIV.

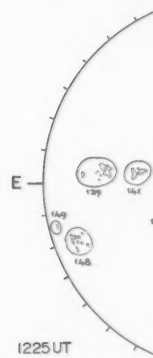
X-RAY
OSO-5



0000-0315 UT

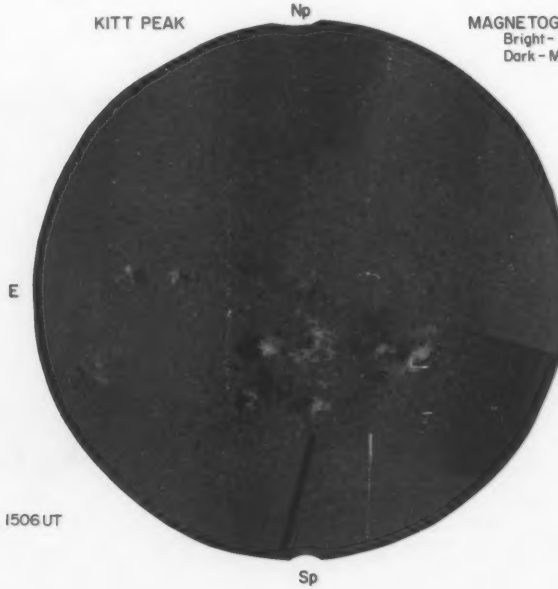
Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULB



1225 UT

KITT PEAK



1506 UT

MAGNETOG
Bright-
Dark - M

14.85, $B_o = 6.49$, $L_o = 359.34$)

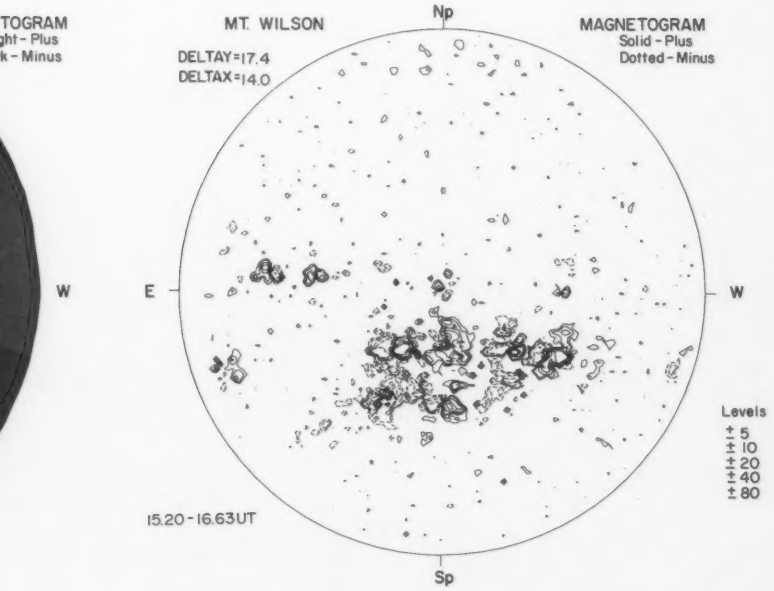
ULBERT CALCIUM REPORT

GOOD	S
24 - 2700	- 3.0
27 - 1100	- 3.5
28 - 1700	- 2.5
36 - 1000	- 3.5
39 - 0600	- 2.5
41 - 0500	- 2.5
47 - 0600	- 2.5

TOGRAM
ght - Plus
k - Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0

MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
± 5
± 10
± 20
± 40
± 80

15.20 - 16.63 UT

RAMEY AFB

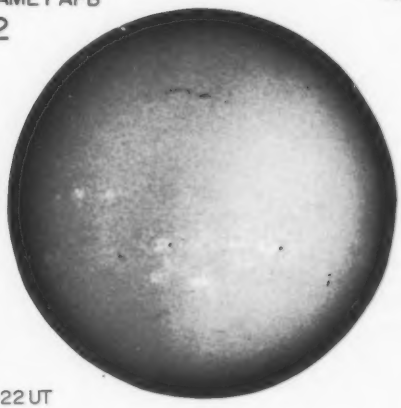
12

Np

Hα

E

W



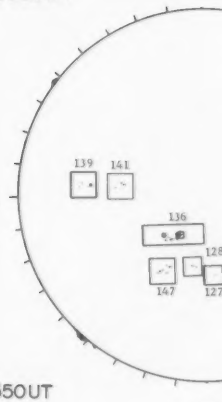
1122 UT

Sp

BOULDER

Np

E



1550UT

Sp

NELC LA POSTA

Np

NO DA

E

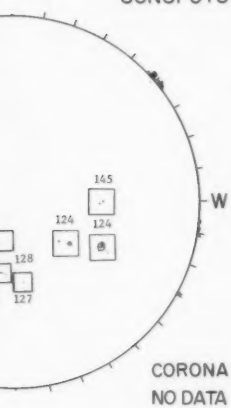
EQUIP

L

Sp

Np

SUNSPOTS



CORONA
NO DATA

Sp

Np

2.0 CM

DATA

UIPMENT

W

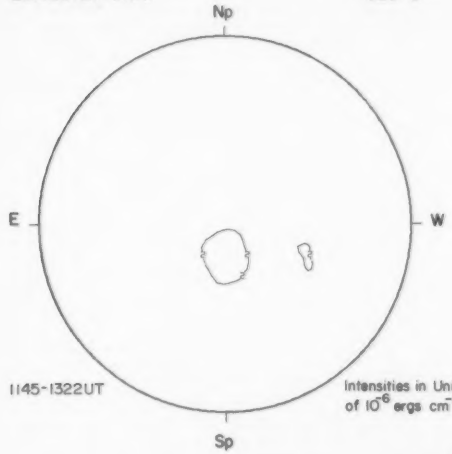
Sp

ANT. TEMP. UNIT 100° K

55
Aug 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5



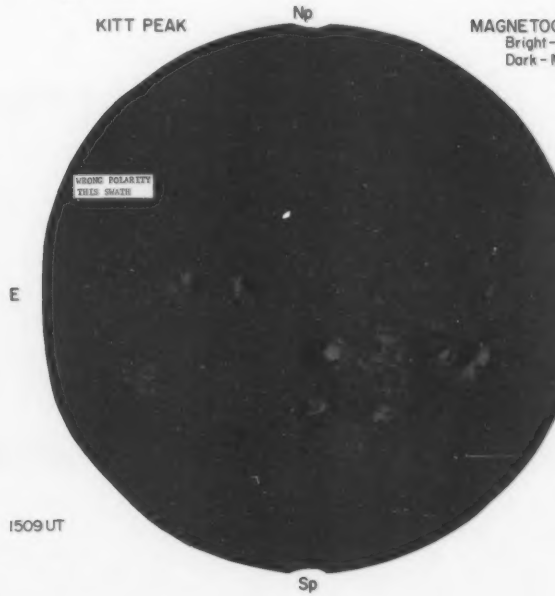
1145-1322UT

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULB

1420UT

KITT PEAK

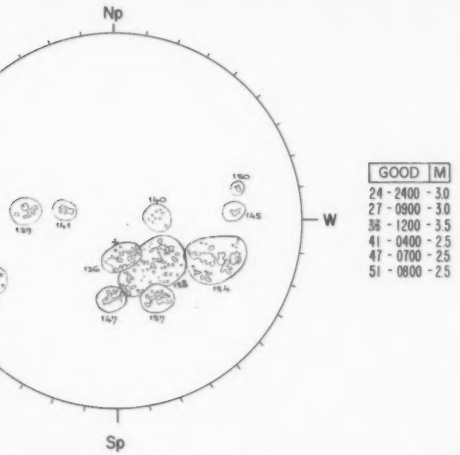


1509UT

MAGNETOG
Bright-
Dark-

= 15.21, B_o = 6.54, L_o = 346.12)

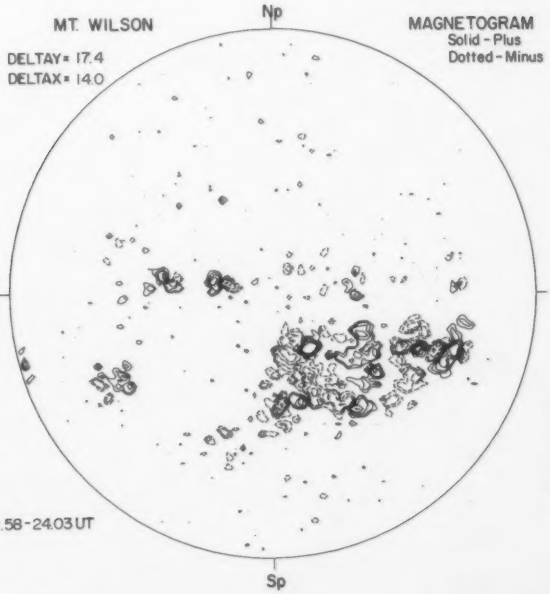
ULBERT CALCIUM REPORT



GOOD	M
24 - 2400	- 3.0
27 - 0900	- 3.0
36 - 1200	- 3.5
41 - 0400	- 2.5
47 - 0700	- 2.5
51 - 0800	- 2.5

ETOGRAM
ght - Plus
rk - Minus

MT. WILSON
DELTAY = 17.4
DELTAX = 14.0

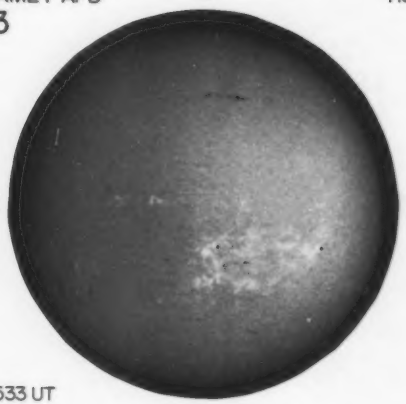


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

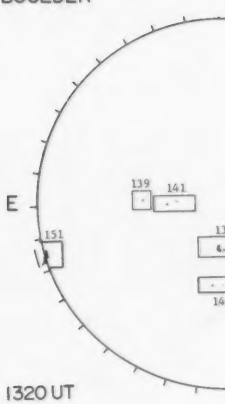
22.58 - 24.03 UT

RAMEY AFB
13



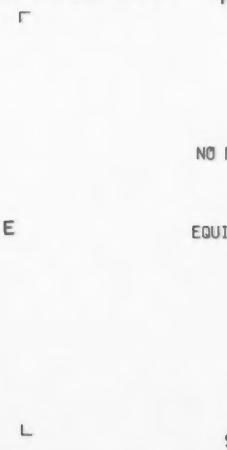
1533 UT

BOULDER



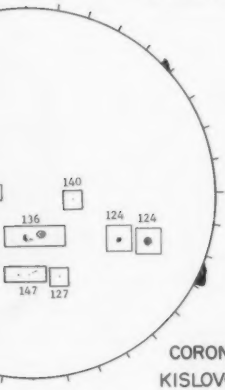
1320 UT

NELC LA POSTA



Np

SUNSPOTS



W

CORONA
KISLOVODSK

Sp

Np

2.0 CM

NO DATA

EQUIPMENT

W

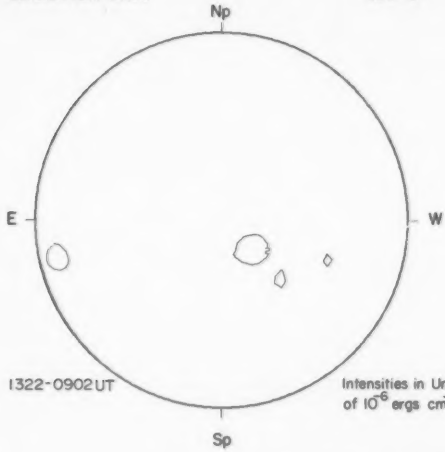
Sp

ANT. TEMP. UNIT 100° K

57
Aug 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5



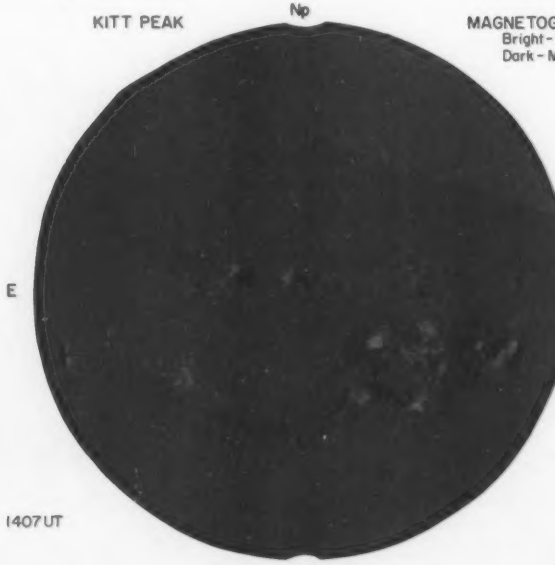
1322-0902 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULB

1140 UT

KITT PEAK



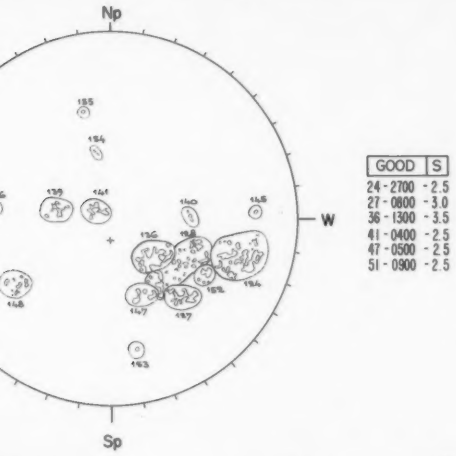
1407 UT

MAGNETOG
Bright -
Dark - M

= 15.55, B_o = 6.59, L_o = 332.90)

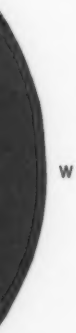
58
Aug 74

ULBERT CALCIUM REPORT



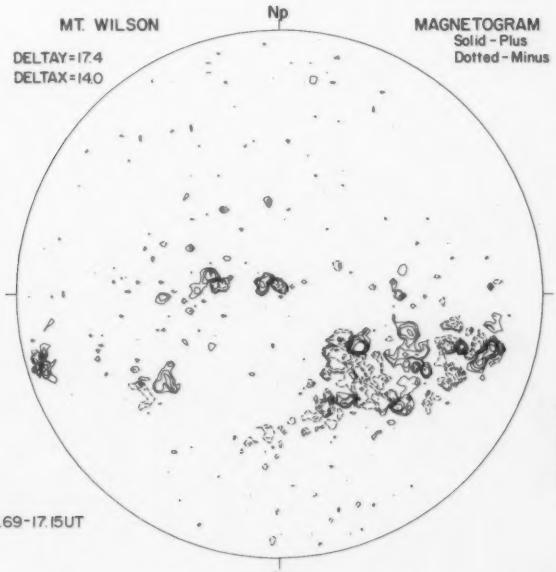
GOOD	S
24 - 2700	- 2.5
27 - 0800	- 3.0
36 - 1300	- 3.5
41 - 0400	- 2.5
47 - 0500	- 2.5
51 - 0900	- 2.5

TOGRAM
ght - Plus
k - Minus



MT. WILSON
DELTAY=17.4
DELTAX=14.0

MAGNETOGRAM
Solid - Plus
Dotted - Minus

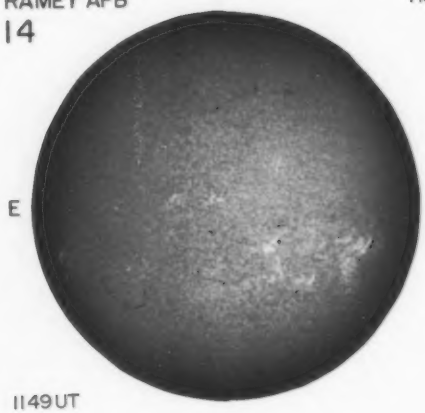


Levels
± 5
± 10
± 20
± 40
± 80

15.69-17.15UT

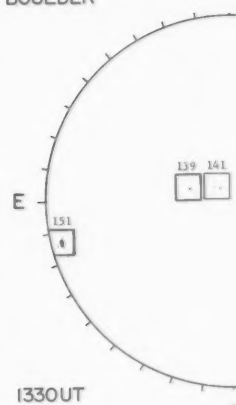
RAMEY AFB

14



1149UT

BOULDER



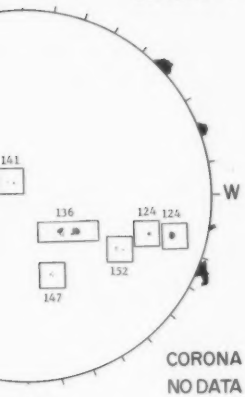
1330UT

NELC LA POSTA

E

Np

SUNSPOTS



CORONA
NO DATA

Sp

Np

2.0 CM

NO DATA

EQUIPMENT

W

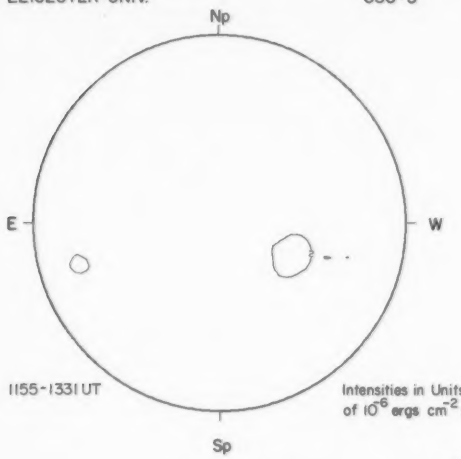
Sp

ANT. TEMP. UNIT 100°K

59
Aug 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

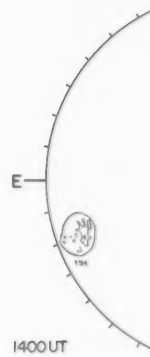
X-RAY
OSO-5



1155-1331 UT

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULB



1400 UT

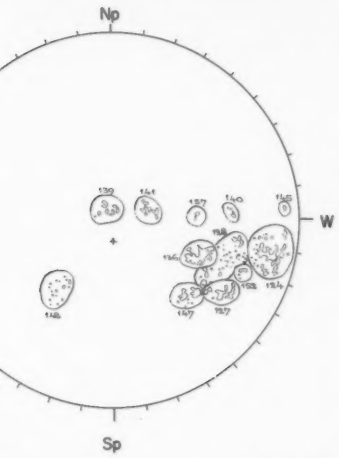
KITT PEAK

MAGNETOG
Bright -
Dark - M

15.90, $B_o = 6.64$, $L_o = 319.69$)

60
Aug 74

ULBERT CALCIUM REPORT

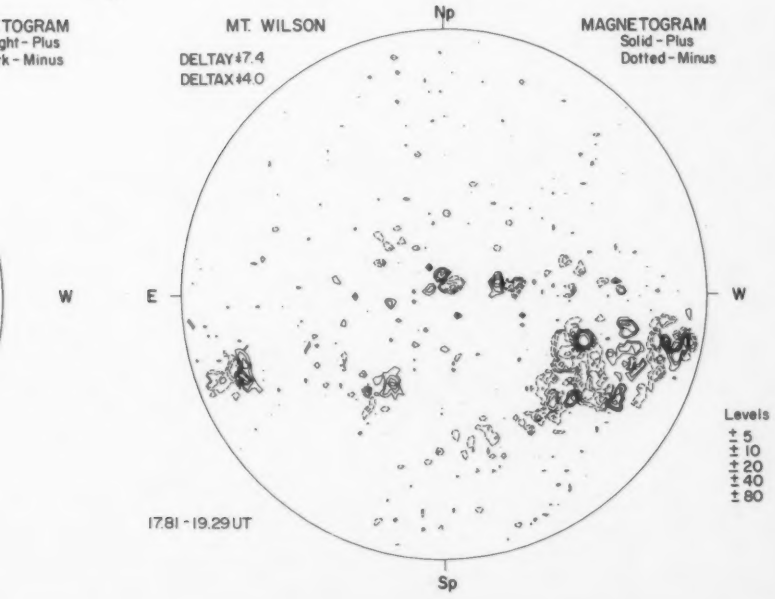


GOOD	M
24 - 2700	- 2.5
27 - 0900	- 2.5
36 - 1300	- 3.5
41 - 0400	- 3.0
47 - 0600	- 2.5
51 - 1300	- 2.5

TOGRAM
ght - Plus
k - Minus

MT. WILSON
DELTAY 47.4
DELTAX 44.0

MAGNETOGRAM
Solid - Plus
Dotted - Minus



17.81 - 19.29 UT

RAMEY AFB

15

Np

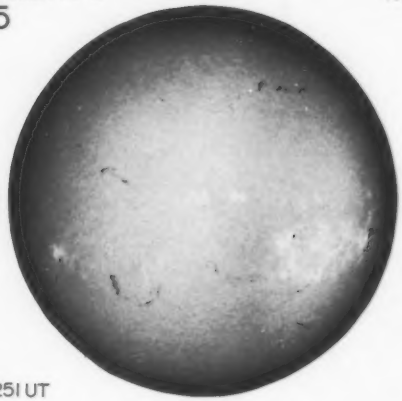
Hα

E

W

1251 UT

Sp



BOULDER

Np

E

139

151

a

1745 UT

Sp

NELC LA POSTA

Np

NO DAT

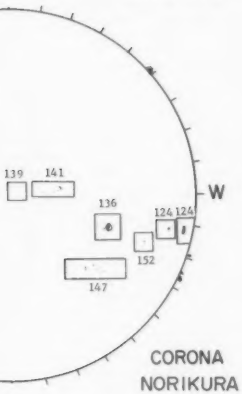
E

EQUIPME

Sp

Np

SUNSPOTS



CORONA
NORIKURA

Sp

Np

2.0 CM

DATA

IPMENT

W

Sp

ANT. TEMP. UNIT 100°K

61
Aug 74

AUGUST 16, 1974 (P= 16.

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBE

Np

E

Note: Last half of August not available at time of publication.

W

E

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1400 UT

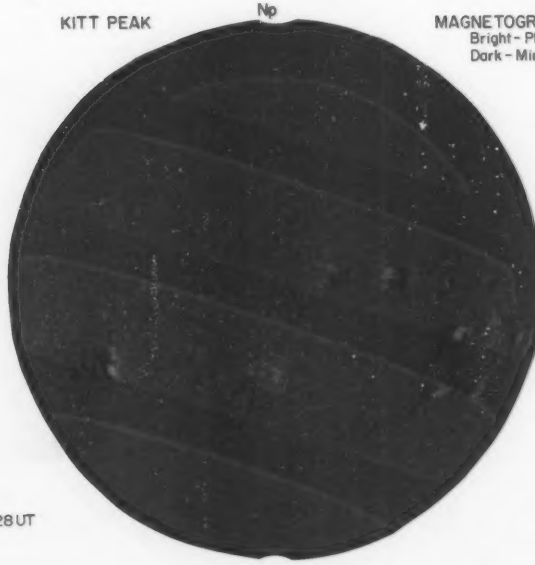
Sp

KITT PEAK

Np

MAGNETOGR
Bright - P
Dark - Mi

E



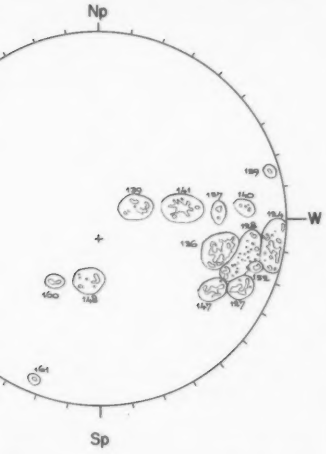
1528 UT

Sp

16.24, $B_o = 6.69$, $L_o = 306.47$)

62
Aug 74

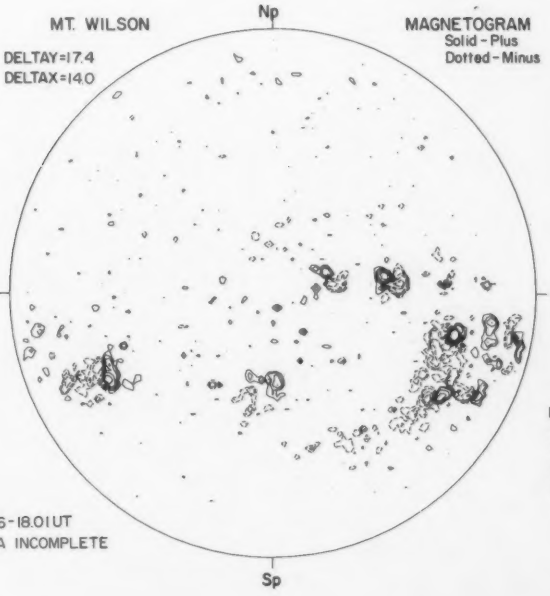
LBERT CALCIUM REPORT



FAIR	M
27 - 0700	- 2.5
36 - 1400	- 3.0
39 - 0400	- 2.5
41 - 1000	- 4.0
47 - 0600	- 2.5
51 - 1400	- 2.5

OGRAM
t - Plus
- Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0



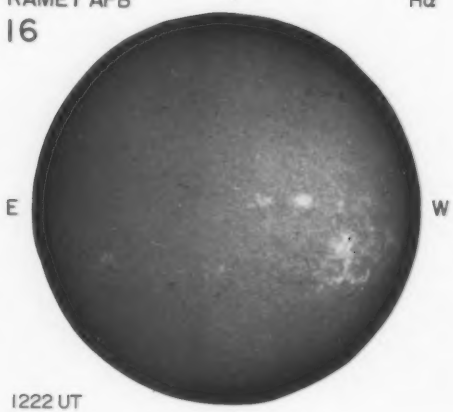
MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

16.66 - 18.01 UT
DATA INCOMPLETE

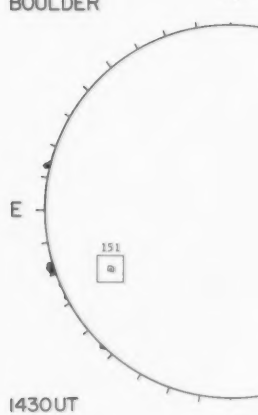
RAMEY AFB

16



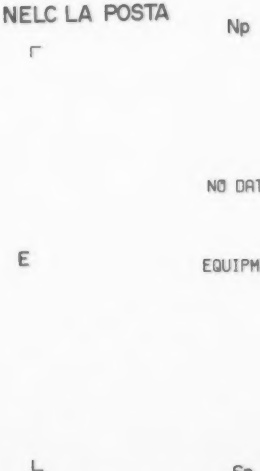
1222 UT

BOULDER



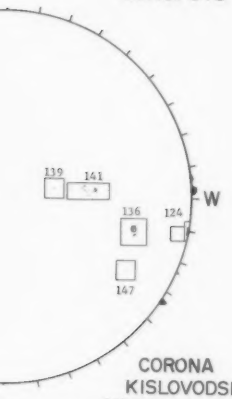
1430 UT

NELC LA POSTA



Np

SUNSPOTS



CORONA
KISLOVODSK
NO DATA 330°-355°

Sp

Np

2.0 CM

DATA

IPMENT

W

Sp

ANT. TEMP. UNIT 100° K

63
Aug 74

AUGUST 17, 1974 (P = 16

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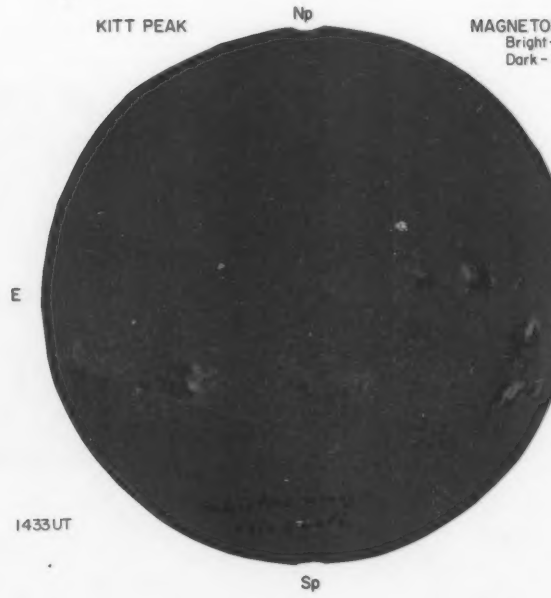
X-RAY
OSO-5

McMATH-HULB

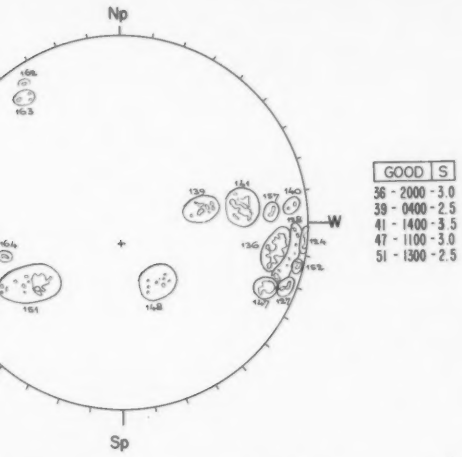
Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}



= 16.58, B_o = 6.73, L_o = 293.25)

64
Aug 74

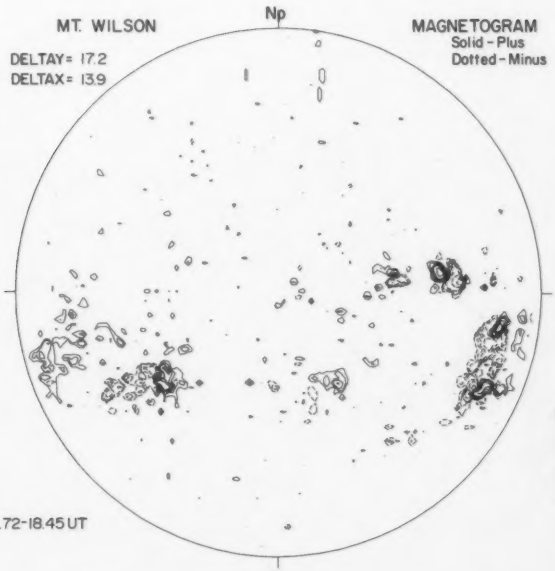
HULBERT CALCIUM REPORT



GOOD	S
36 - 2000 - 3.0	
39 - 0400 - 2.5	
41 - 1400 - 3.5	
47 - 1100 - 3.0	
51 - 1300 - 2.5	

ETOGRAM
ight - Plus
ark - Minus

MT. WILSON
DELTAY= 17.2
DELTAX= 13.9

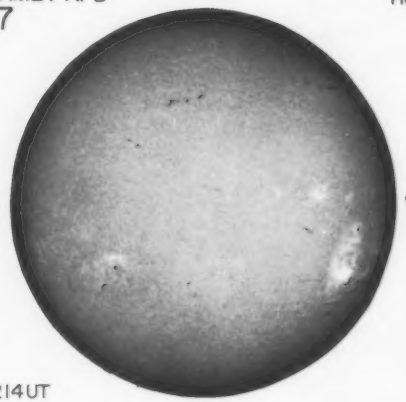


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

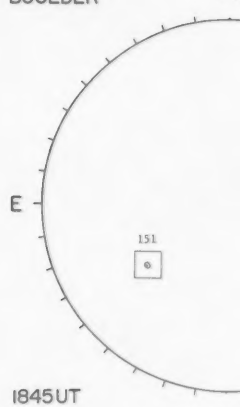
16.72-18.45 UT

RAMEY AFB
17



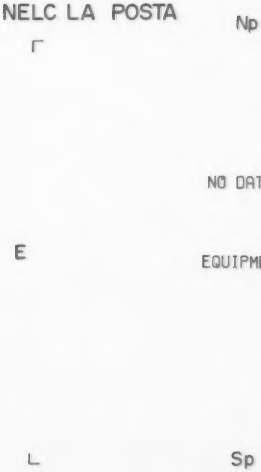
1214UT

BOULDER



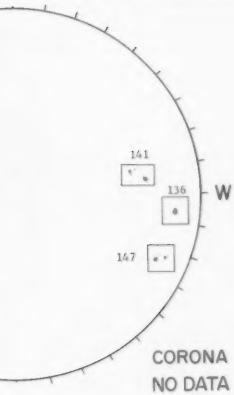
1845UT

NELC LA POSTA



Np

SUNSPOTS



CORONA
NO DATA

Sp

Np

2.0 CM

DATA

UIPMENT

W

Sp

ANT. TEMP. UNIT 100° K

65
Aug 74

AUGUST 18, 1974 (P = 16.9

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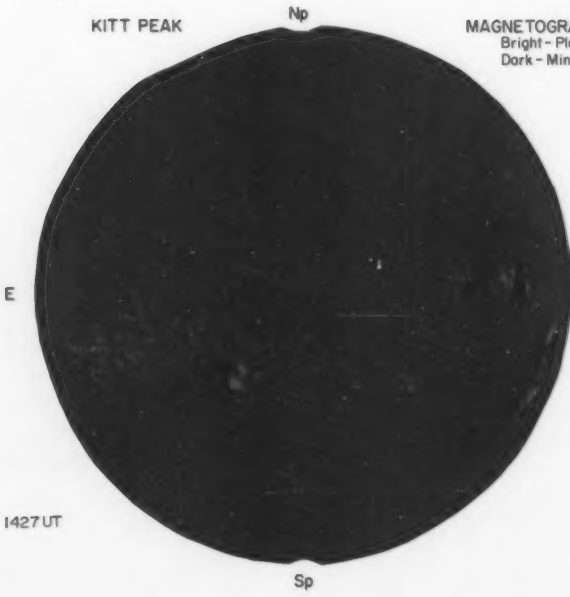
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBE

KITT PEAK

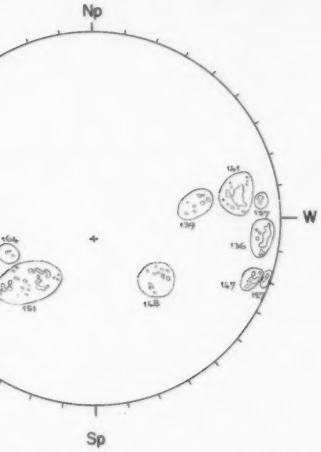
MAGNETOGR
Bright - Pl
Dark - Min



16.91, $B_o = 6.78$, $L_o = 280.03$)

66
Aug 74

LBERT CALCIUM REPORT

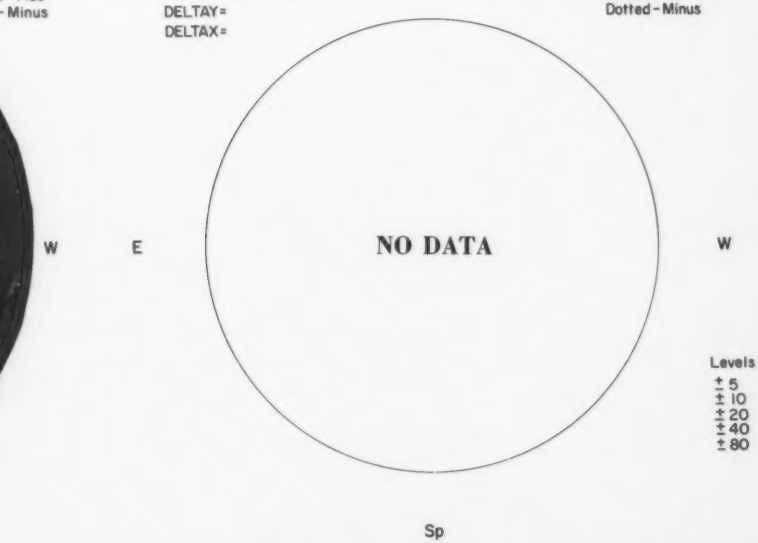


FAIR	D
36 - 1800	- 3.0
39 - 0400	- 2.5
41 - 1400	- 3.5
47 - 1000	- 2.5
51 - 1300	- 2.5

OGRAM
- Plus
- Minus

MT. WILSON

DELTAY=
DELTAX=

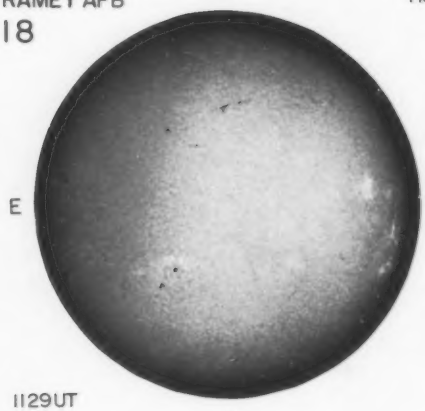


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

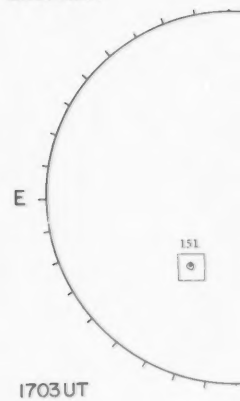
RAMEY AFB

18



1129UT

BOULDER



1703UT

NELC LA POSTA

NO D

E

EQUI

Np

SUNSPOTS

CORONA
NO DATA

Sp

Np

2.0CM

0 DATA

QUIPMENT

W

Sp

ANT. TEMP. UNIT 100° K

67
Aug 74

AUGUST 19, 1974 (P= 17

UNIV. COLLEGE LONDON
LEICESTER UNIV.

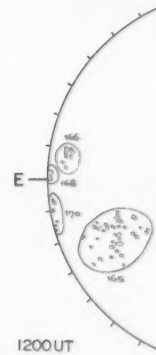
X-RAY
OSO-5

McMATH-HULB

Np

E

W



Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1200 UT

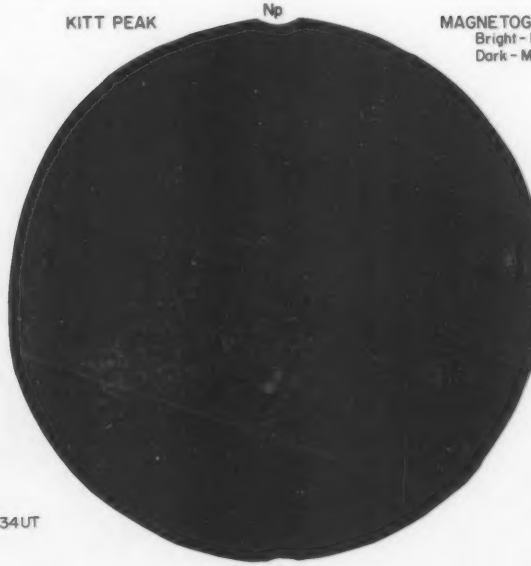
Sp

KITT PEAK

Np

MAGNETOG
Bright -
Dark - M

E



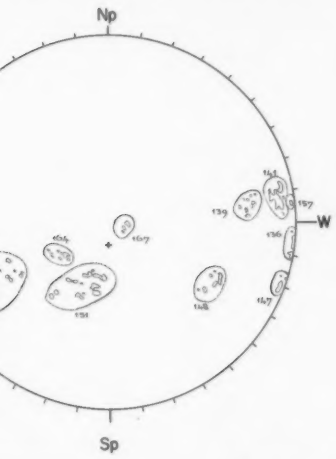
1434 UT

Sp

17.23, $B_o = 6.82$, $L_o = 266.82$)

68
Aug 74

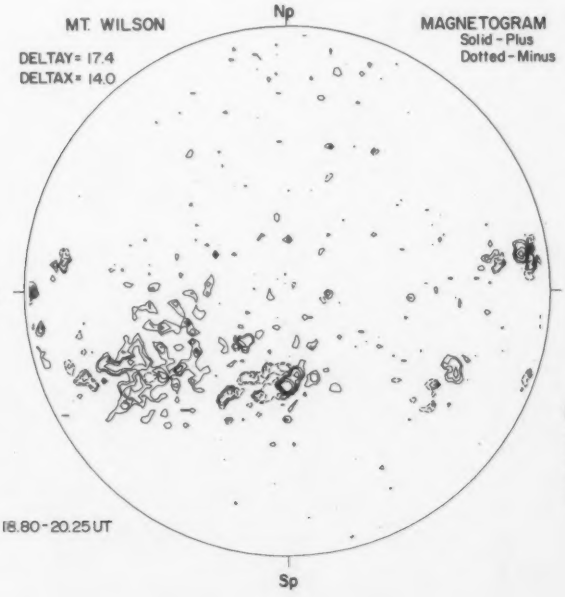
ULBERT CALCIUM REPORT



FAIR	D
36 - 1000	- 2.5
39 - 0500	- 2.5
41 - 1300	- 3.5
51 - 1200	- 2.5
64 - 0400	- 2.5
68 - 0400	- 3.0

TOGRAM
ght - Plus
k - Minus

MT. WILSON
DELTAY= 17.4
DELTAX= 14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

18.80 - 20.25 UT

RAMEY AFB

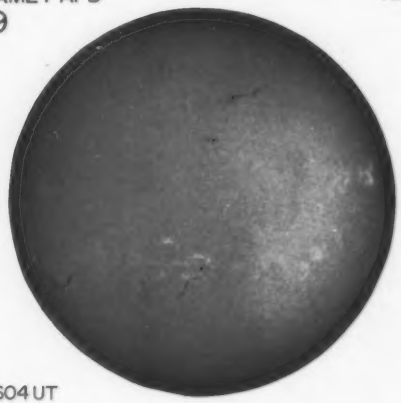
19

Np

Hα

E

W



1604 UT

Sp

BOULDER

N

E

168

1830UT

S

NELC LA POSTA

N

NO D

E

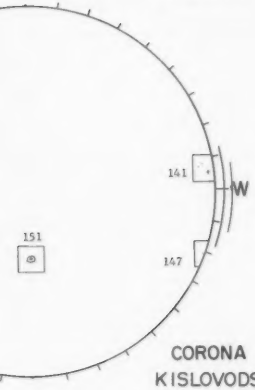
EQUI

L

S

Np

SUNSPOTS



CORONA
KISLOVODSK

Sp

Np

2.0CM

NO DATA

EQUIPMENT

W

Sp

ANT. TEMP. UNIT 100° K

69
Aug 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULB

Np

E

W

E

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

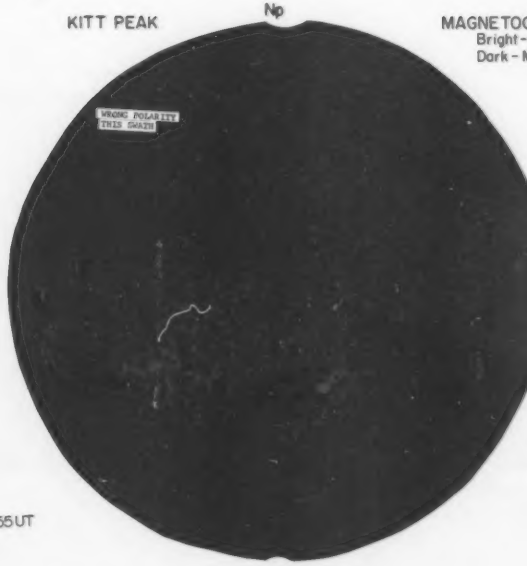
1220UT

Sp

KITT PEAK

Np

MAGNETOG
Bright -
Dark - N



E

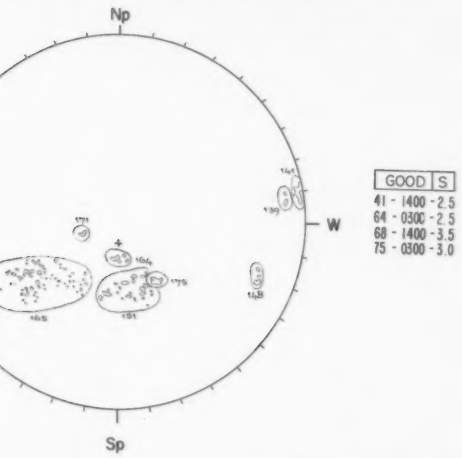
1355UT

Sp

= 17.55, B_o = 6.86, L_o = 253.60)

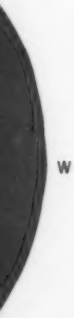
Aug 74 70

HULBERT CALCIUM REPORT

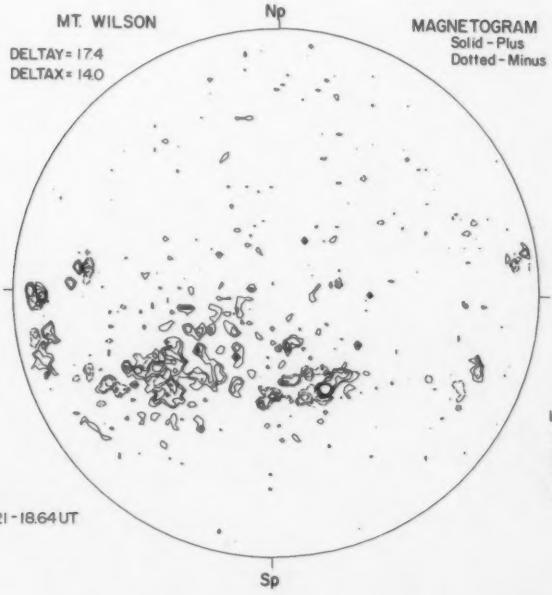


GOOD	S
41 - 1400	- 2.5
64 - 0300	- 2.5
68 - 1400	- 3.5
75 - 0300	- 3.0

TOGRAM
ght - Plus
rk - Minus



MT. WILSON
DELTAY = 17.4
DELTAX = 14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

17.21 - 18.64 UT

RAMEY AFB

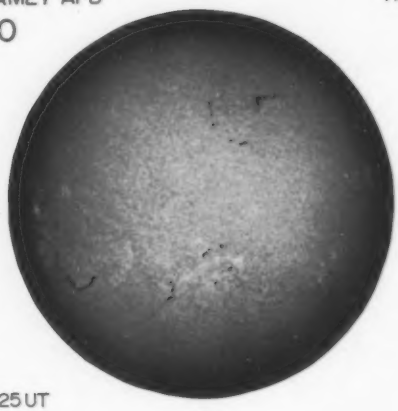
20

Np

Hα

E

W



1125 UT

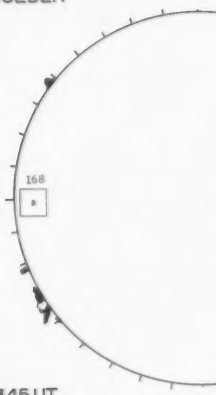
Sp

BOULDER

Np

E

168



1345 UT

Sp

NELC LA POSTA

Np

E

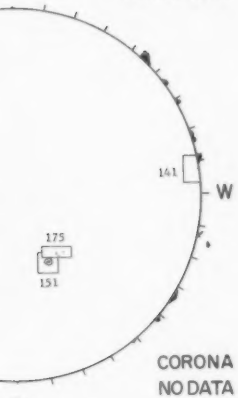
L

1843 UT

S

Np

SUNSPOTS



CORONA
NO DATA

Sp

Np

2.0 CM

Sp

ANT. TEMP. UNIT 100° K

71
Aug 74

AUGUST 21, 1974 (P = 17.

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBE

Np

E

W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1230 UT

Sp

KITT PEAK

Np

MAGNETOGR
Bright - P
Dark - Mi

E

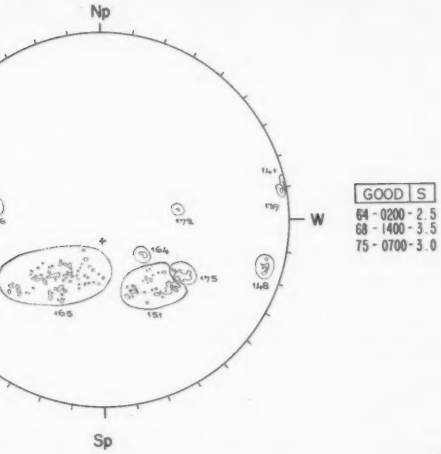
1452 UT

Sp

17.87, $B_o = 6.90$, $L_o = 240.39$)

72
Aug 74

LBERT CALCIUM REPORT

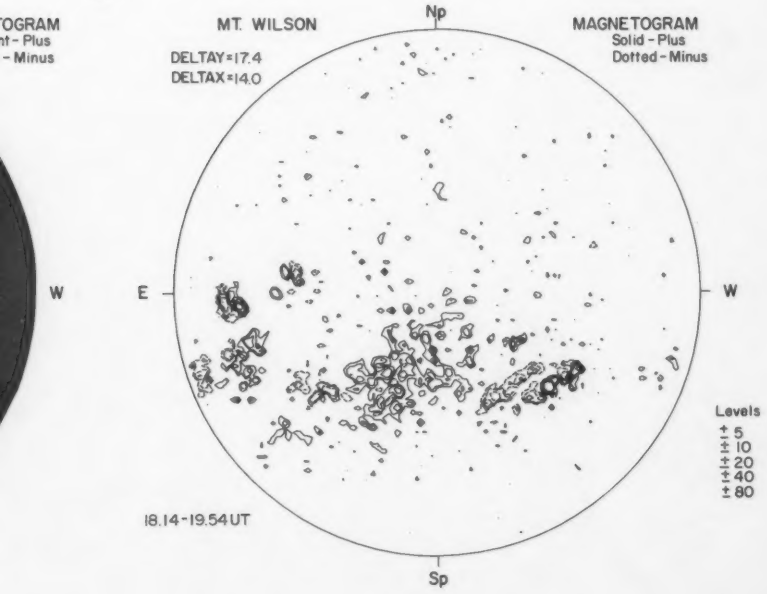


GOOD	S
64 - 0200 - 2.5	
68 - 1400 - 3.5	
75 - 0700 - 3.0	

TOGRAM
nt - Plus
- Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0

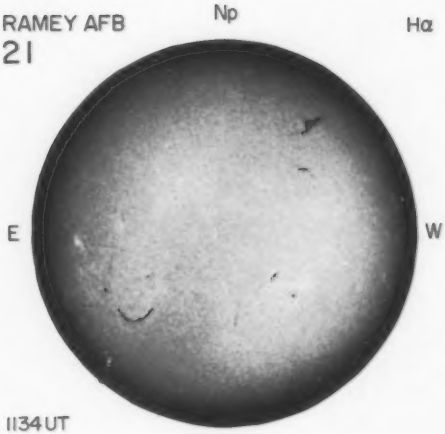
MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
±5
±10
±20
±40
±80

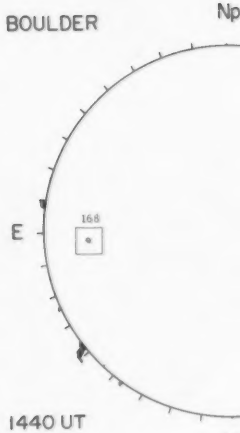
18.14 - 19.54 UT

RAMEY AFB
21



1134 UT

BOULDER



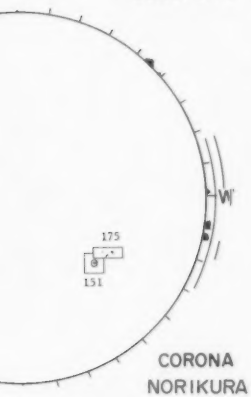
1440 UT

NELC LA POSTA

1648 UT

Np

SUNSPOTS

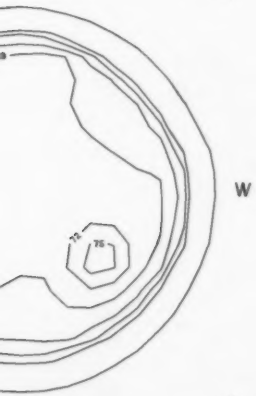


CORONA
NORIKURA

Sp

2.0 CM

Np



Sp

ANT. TEMP. UNIT 100° K

73
Aug 74

AUGUST 22, 1974 (P = 18

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULB

Np

E

W

E

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1235 UT

Sp

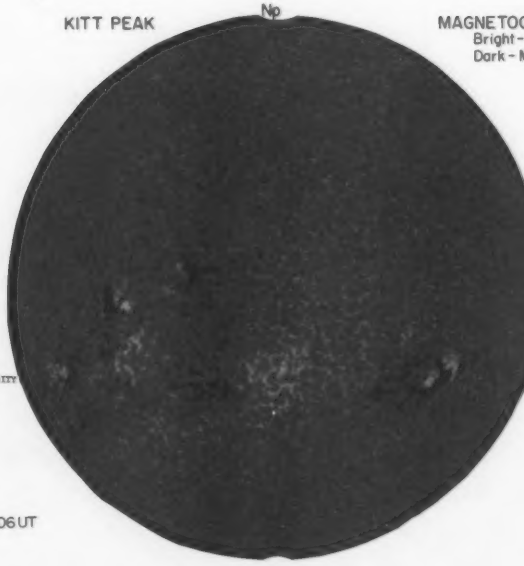
KITT PEAK

Np

MAGNETOG
Bright -
Dark - N

E

WRONG POLARITY



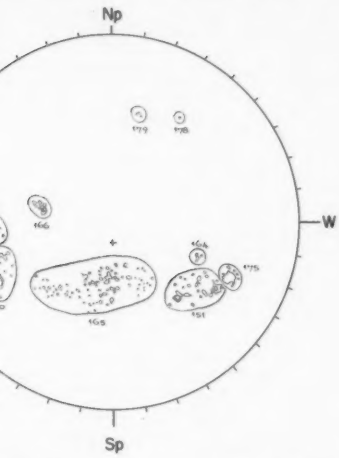
1506 UT

Sp

= 18.18, B_o = 6.94, L_o = 227.17)

74
Aug 74

ULBERT CALCIUM REPORT

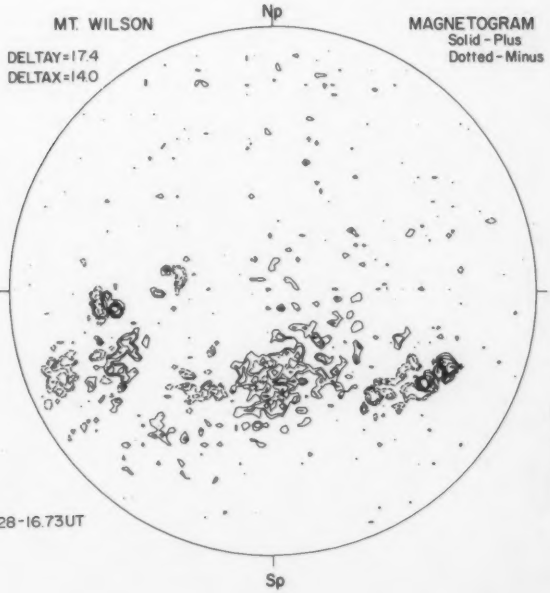


GOOD	S
68 - 1200	- 3.5
75 - 1100	- 4.0

TOGRAM
ght - Plus
rk - Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0

MAGNETOGRAM
Solid - Plus
Dotted - Minus

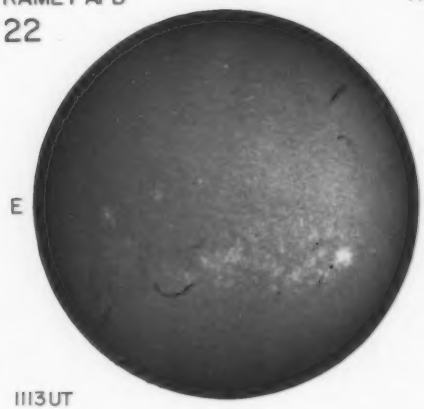


Levels
± 5
± 10
± 20
± 40
± 80

15.28 - 16.73 UT

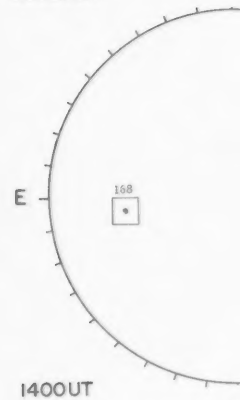
RAMEY AFB

22



1113UT

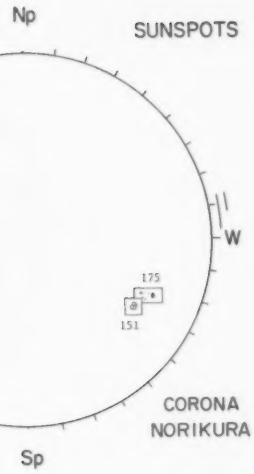
BOULDER



1400UT

NELC LA POSTA

1651UT


Np
SUNSPOTS
W
175
151
CORONA
NORIKURA
Sp

2.0 CM
Np
W
Sp
ANT. TEMP. UNIT 100°K

75
Aug 74

AUGUST 23, 1974 (P = 1

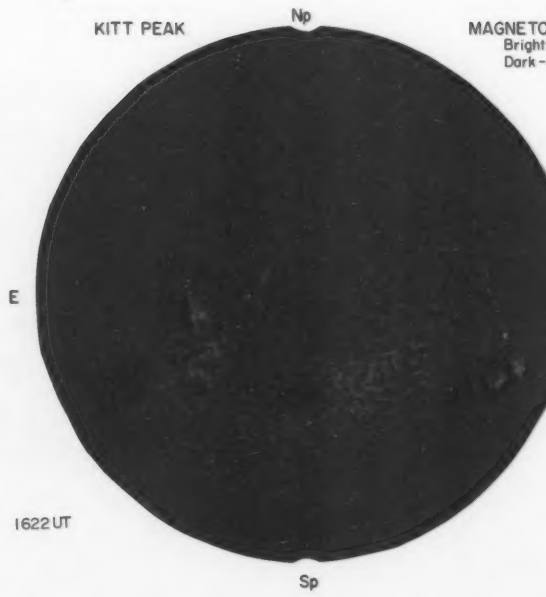
UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HUL

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1430 UT



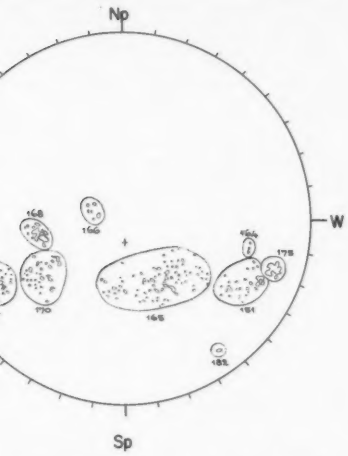
MAGNETO
Bright
Dark –

1622 UT

= 18.49, B_o = 6.97, L_o = 213.96)

76
Aug 74

HULBERT CALCIUM REPORT



FAIR	M
68 - 1000	-3.5
75 - 1000	-3.5

ETOGRAM
right - Plus
ark - Minus

MT. WILSON

DELTAY=
DELTAX=

Np

MAGNETOGRAM
Solid - Plus
Dotted - Minus

W E

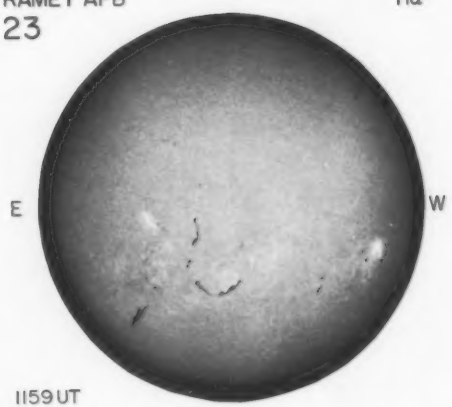
NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

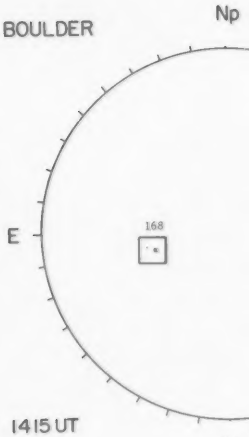
Sp

RAMEY AFB
23



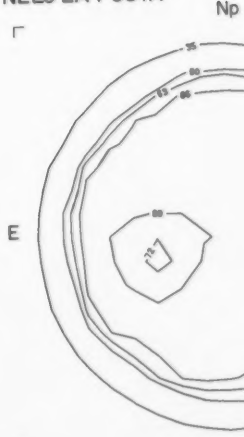
1159 UT

BOULDER



1415 UT

NELC LA POSTA



2107 UT

Np

SUNSPOTS

CORONA
PIC DU MIDI

Sp

Np

2.0 CM

Sp

ANT. TEMP. UNIT 100°K

77
Aug 74

AUGUST 24, 1974 (P = 18

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HUL

Np

E

W

E

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1230UT

Sp

KITT PEAK

Np

MAGNETO
Bright
Dark –

E

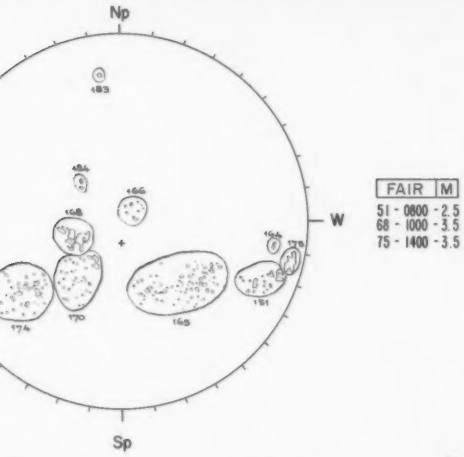
1437UT

Sp

= 18.79, B_o = 7.00, L_o = 200.74)

HULBERT CALCIUM REPORT

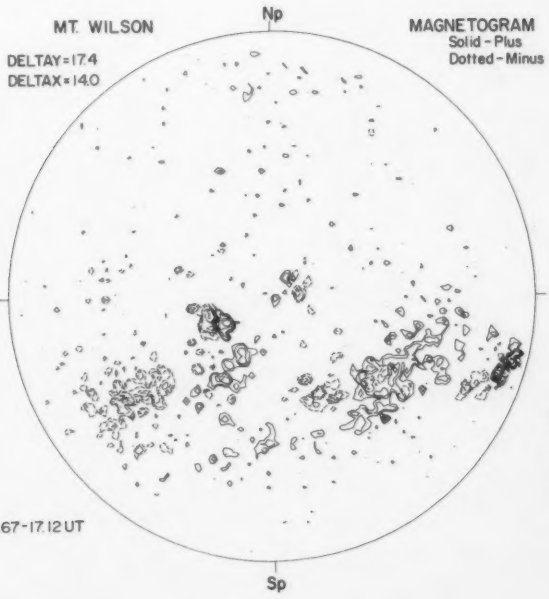
78
Aug 74



FAIR	M
51 - 0800	- 2.5
68 - 1000	- 3.5
75 - 1400	- 3.5

ETOGRAM
right - Plus
ark - Minus

MT. WILSON
DELTAY = 17.4
DELTAX = 14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

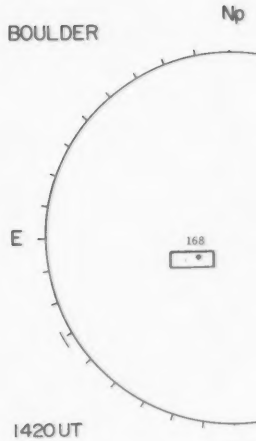
Levels
± 5
± 10
± 20
± 40
± 80

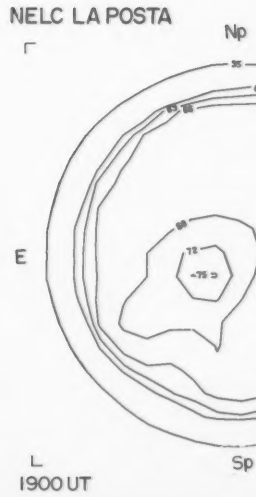
15.67 - 17.12 UT

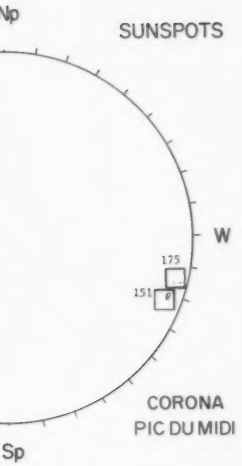
RAMEY AFB

24

Np
Hα
E
W
1154 UT
Sp


BOULDER
Np
E
168
1420 UT
Sp


NELC LA POSTA
Np
E
1900 UT
Sp


Np
SUNSPOTS
W
175
151
CORONA
PIC DU MIDI
Sp

2.0 CM
Np
W
Sp
ANT. TEMP. UNIT 100° K

79
Aug 74

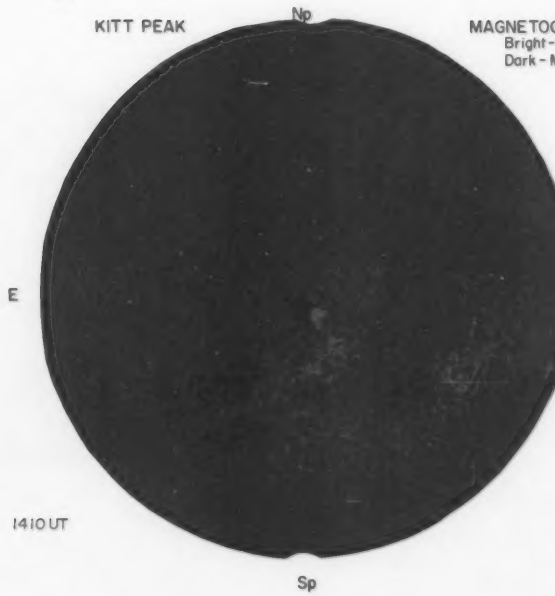
UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULB

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1300 UT

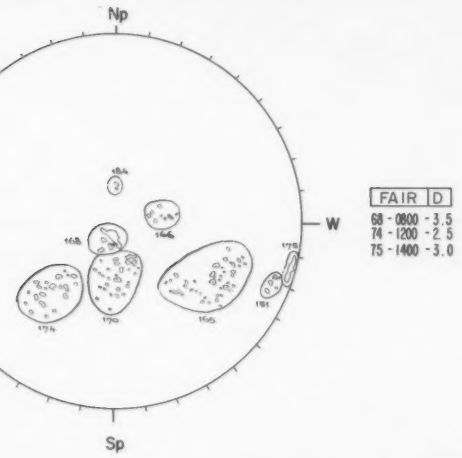


MAGNETOG
Bright -
Dark - M

= 19.09, B_o = 7.03, L_o = 187.53)

80
Aug 74

HULBERT CALCIUM REPORT

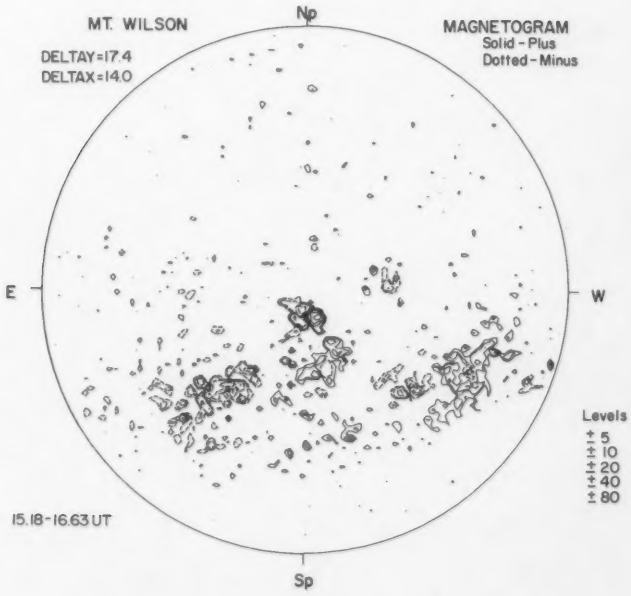


FAIR D
68 - 0800 - 3.5
74 - 1200 - 2.5
75 - 1400 - 3.0

TOGRAM
ght - Plus
rk - Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0

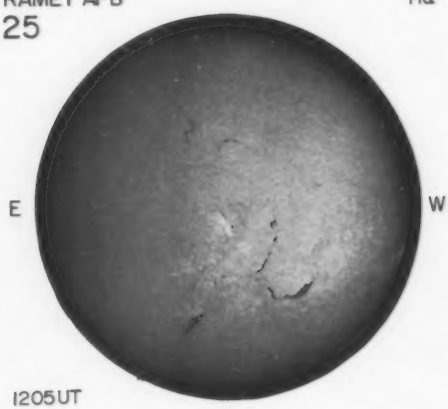
MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
± 5
± 10
± 20
± 40
± 80

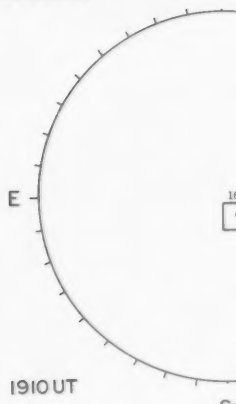
15.18-16.63 UT

RAMEY AFB
25



1205UT

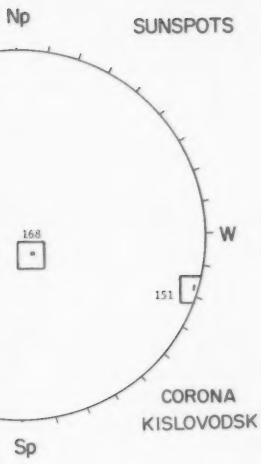
BOULDER



1910 UT

NELC LA POSTA

1753UT



CORONA
KISLOVODSK

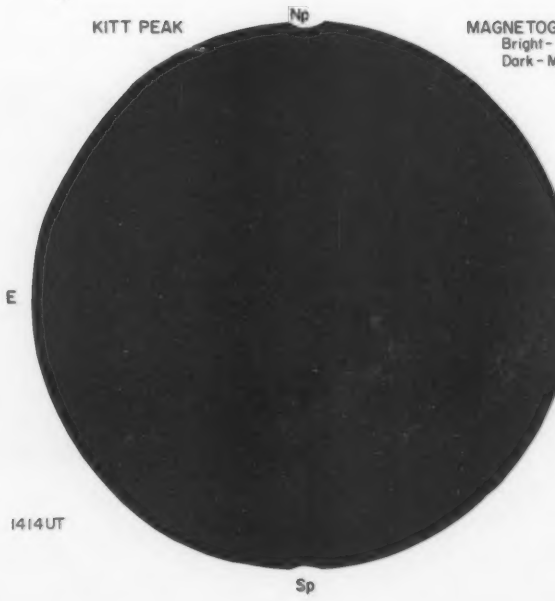
81
Aug 74

AUGUST 26, 1974 (P = 19

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULB

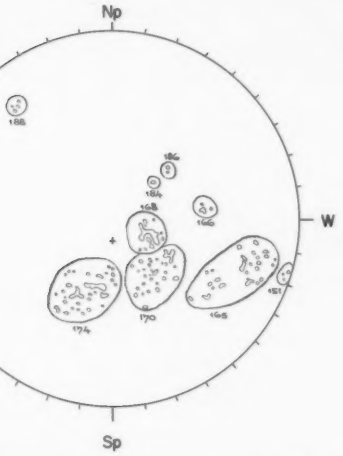


MAGNETOG
Bright -
Dark - M

= 19.38, B_o = 7.06, L_o = 174.32)

82
Aug 74

ULBERT CALCIUM REPORT



FAIR | D
68 - 0800 - 3.0
74 - 1500 - 2.5

TOGRAM
ght - Plus
k - Minus

MT. WILSON
DELTAY=
DELTAX=

Np

MAGNETOGRAM
Solid - Plus
Dotted - Minus

W E

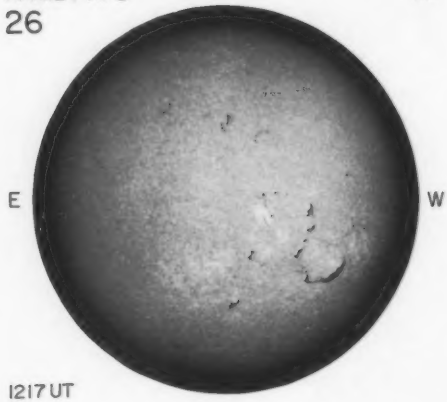
NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

RAMEY AFB
26

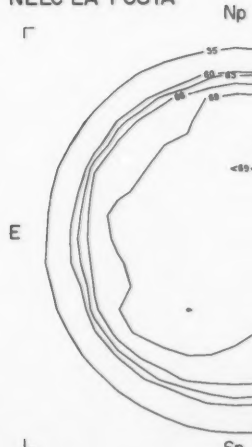


1217 UT

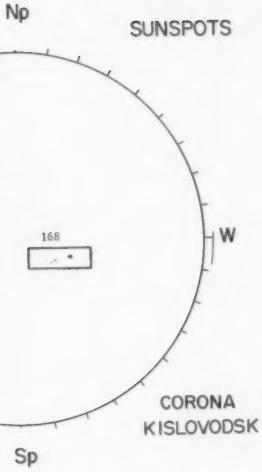
BOULDER

1525 UT

NELC LA POSTA



1722 UT


Np
SUNSPOTS
168
W
CORONA
KISLOVODSK
Sp

2.0CM
Np
W
Sp
ANT. TEMP. UNIT 100° K

83
Aug 74

AUGUST 27, 1974 (P= 19.6

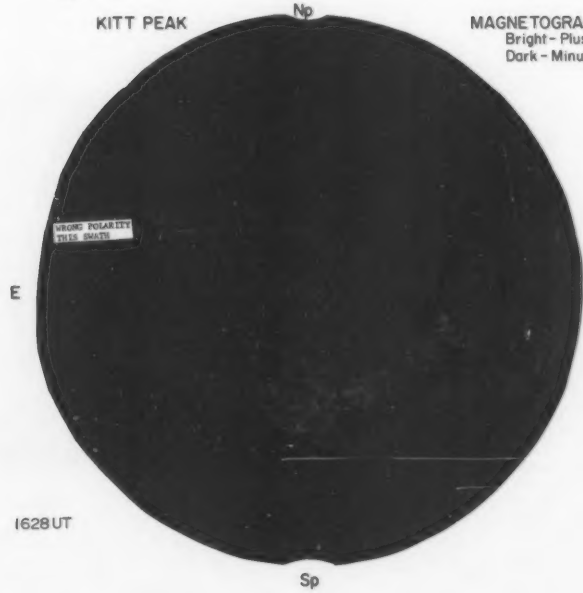
UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBER

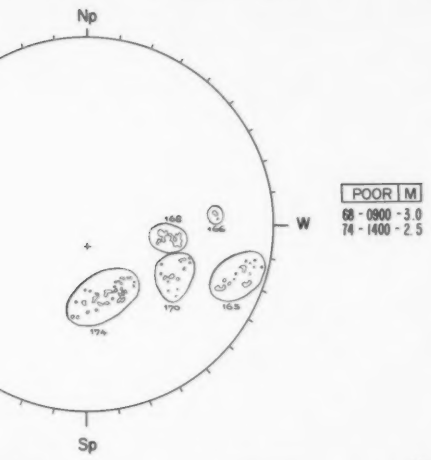
Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1410UT



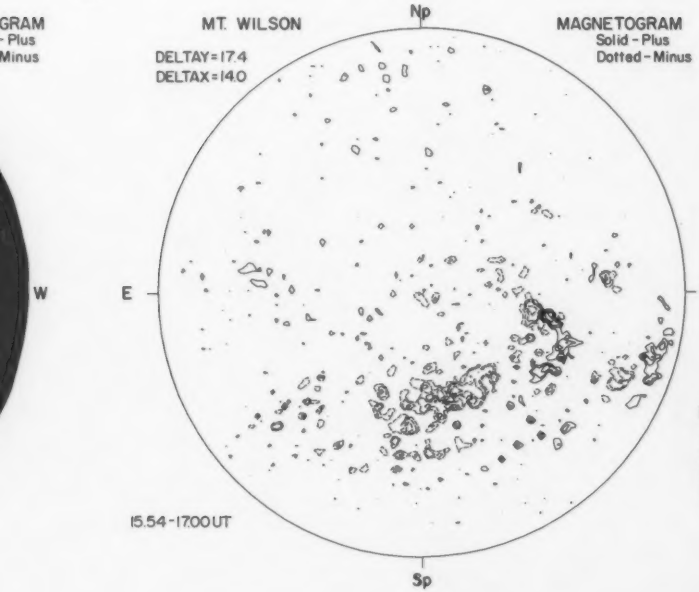
9.66, $B_o = 7.09$, $L_o = 161.11$)

BERT CALCIUM REPORT



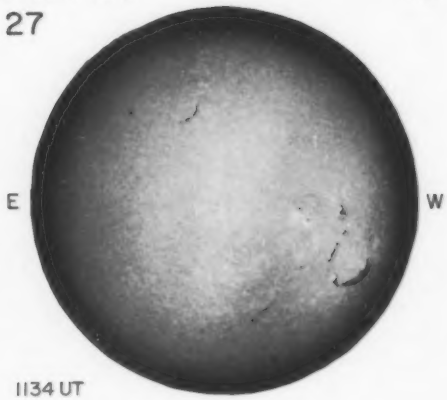
POOR	M
68 - 0900	- 3.0
74 - 1400	- 2.5

GRAM
- Plus
Minus



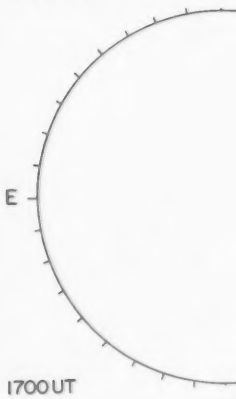
RAMEY AFB

27



1134 UT

BOULDER



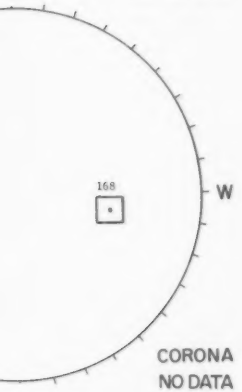
1700 UT

NELC LA POSTA

1620 UT

Np

SUNSPOTS



CORONA
NO DATA

Sp

2.0 CM

Np

Sp

ANT. TEMP. UNIT 100°K

85
Aug 74

AUGUST 28, 1974 (P= 19

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULB

Np

E

W

E

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1150UT

Sp

KITT PEAK

Np

MAGNETO
Bright-
Dark-

WRONG POLARITY
THIS SWATH

WRONG POLARITY
THIS SWATH

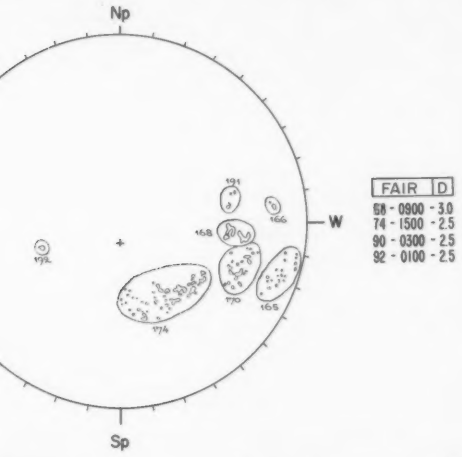
E

1640UT

Sp

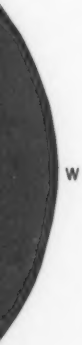
= 19.94, B_o = 7.11, L_o = 147.89)

HULBERT CALCIUM REPORT

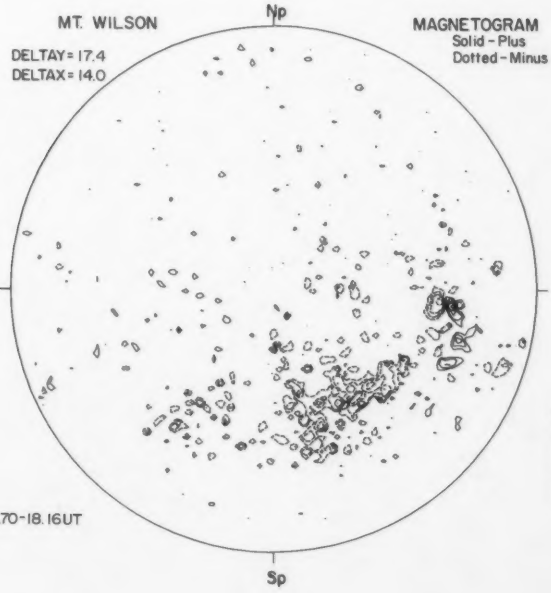


FAIR	D
68 - 0900	- 3.0
74 - 1500	- 2.5
90 - 0300	- 2.5
92 - 0100	- 2.5

ETOGRAM
ight - Plus
ark - Minus



MT. WILSON
DELTAY = 17.4
DELTAX = 14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

16.70 - 18.16 UT

RAMEY AFB

28

Np

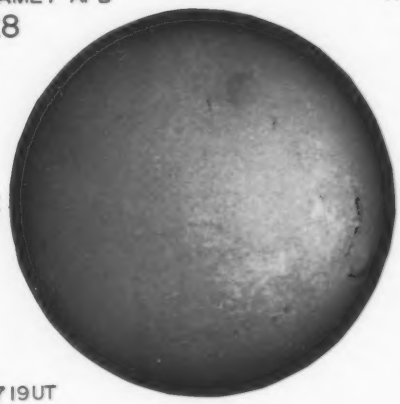
Hα

E

W

Sp

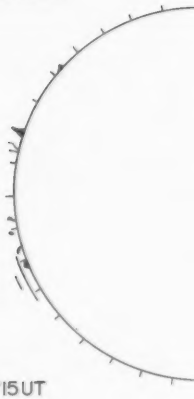
1719UT



BOULDER

E

1715UT

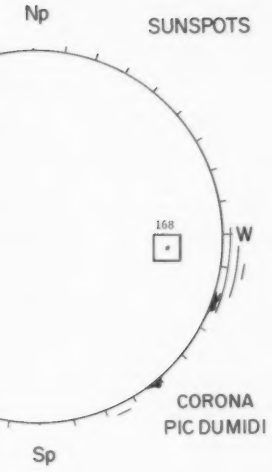


NELC LA POSTA

E

L

1815UT


Np
SUNSPOTS
168
W
CORONA
PIC DUMIDI
Sp

Np
2.0CM
W
Sp
ANT. TEMP. UNIT 100° K

87
Aug 74

AUGUST 29, 1974 (P=20

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULB

Np

E

W

E

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1600 UT

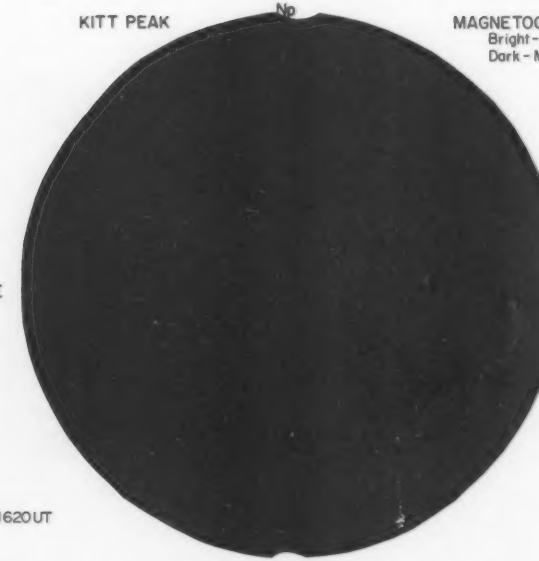
Sp

KITT PEAK

Np

MAGNETOG
Bright -
Dark - M

E

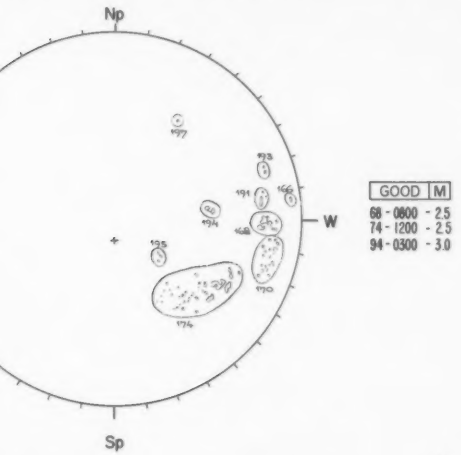


1620 UT

Sp

= 20.22, B_o = 7.14, L_o = 134.68)

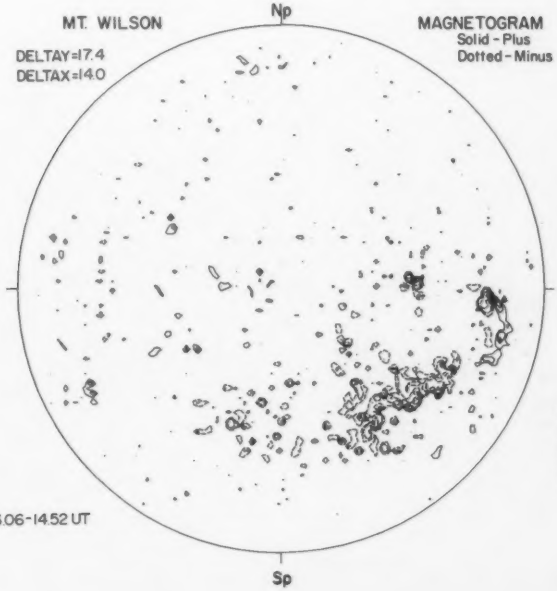
ULBERT CALCIUM REPORT



GOOD	M
68 - 0800	- 2.5
74 - 1200	- 2.5
94 - 0300	- 3.0

TOGRAM
ght - Plus
rk - Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0

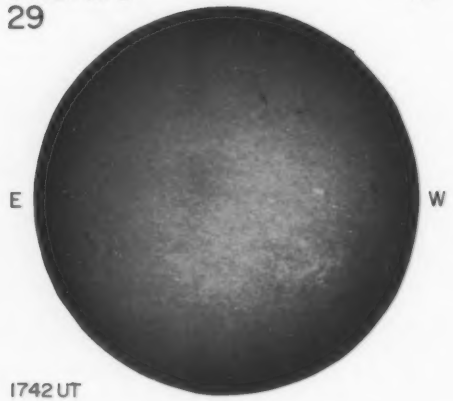


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

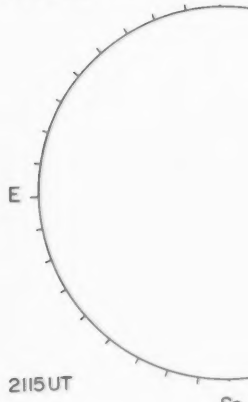
13.06-14.52 UT

RAMEY AFB
29



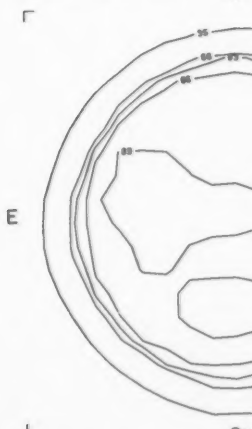
1742 UT

BOULDER

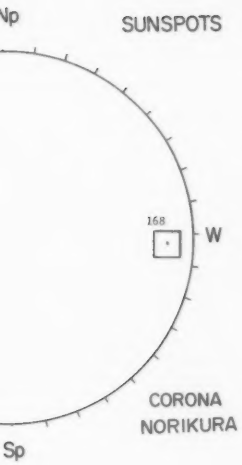


2115 UT

NELC LA POSTA



2028 UT


Np
SUNSPOTS
168
W
CORONA
NORIKURA
Sp

2.0 CM
Np
W
Sp
ANT. TEMP. UNIT 100° K

89
Aug 74

AUGUST 30, 1974 (P= 2

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULB

Np

E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1430UT

Sp

KITT PEAK

Np

MAGNETOG
Bright -
Dark - M

E

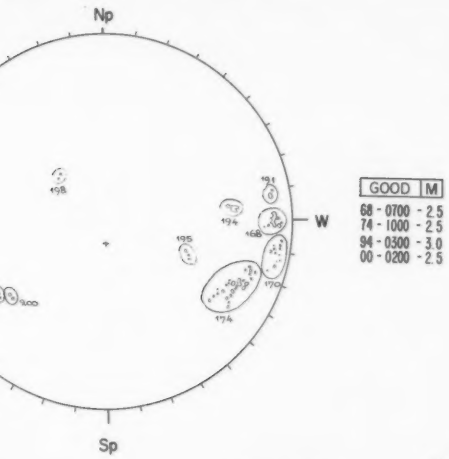
NO DATA

Sp

20.49, B_o = 7.16, L_o = 121.47)

90
Aug 74

LBERT CALCIUM REPORT

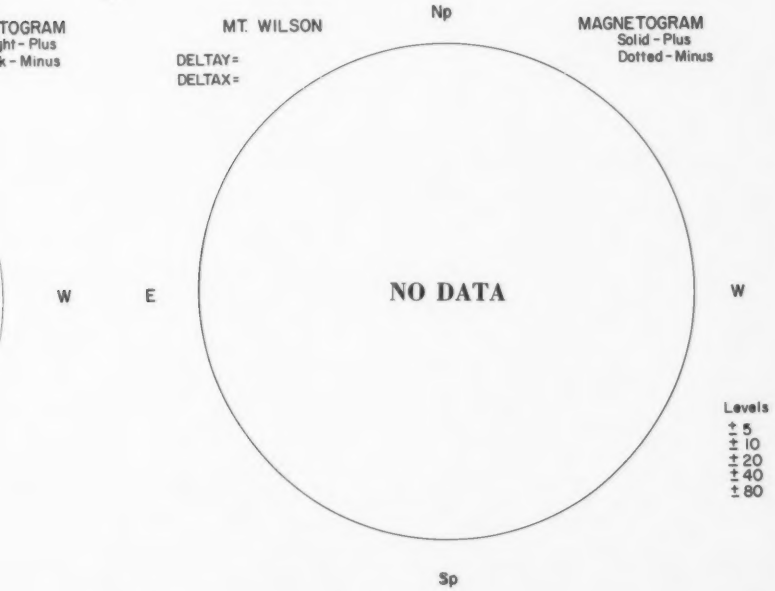


GOOD	M
68 - 0700	- 2.5
74 - 1000	- 2.5
94 - 0300	- 3.0
00 - 0200	- 2.5

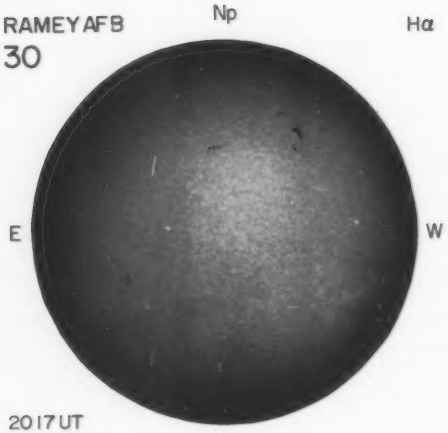
TOGRAM
ght - Plus
k - Minus

MT. WILSON

DELTAY=
DELTAX=

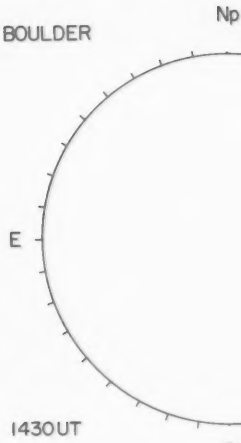


RAMEY AFB
30



2017 UT

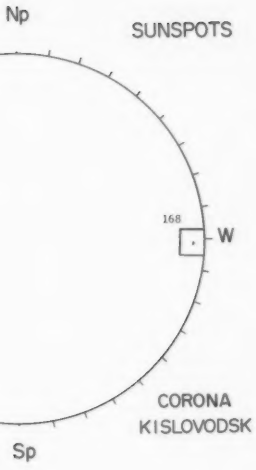
BOULDER

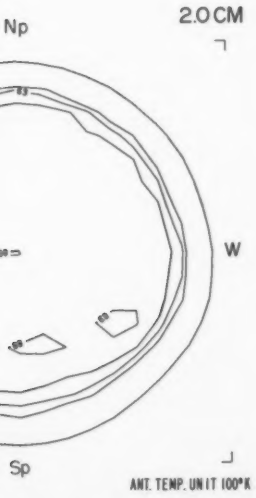


1430 UT

NELC LA POSTA

1651 UT


Np
SUNSPOTS
168
W
CORONA
KISLOVODSK
Sp


Np
2.0 CM
W
Sp
ANT. TEMP. UNIT 100°K

91
Aug 74

AUGUST 31, 1974 (P= 2

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULB

Np

E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1330 UT

Sp

KITT PEAK

Np

MAGNETOG
Bright -
Dark - M

E

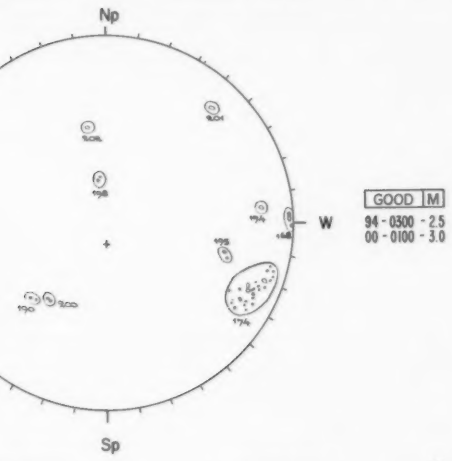
NO DATA

Sp

= 20.75, B_o = 7.18, L_o = 108.26)

92
Aug 74

ULBERT CALCIUM REPORT

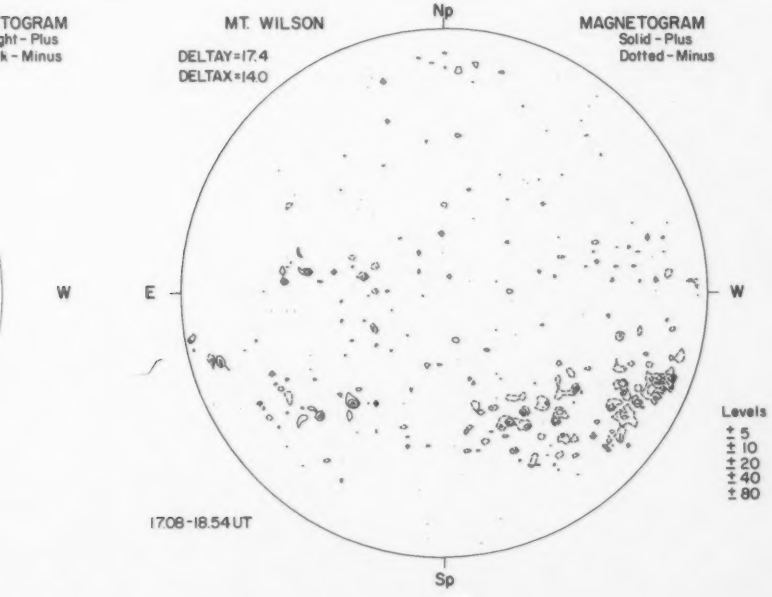


GOOD | M
94 - 0300 - 2.5
00 - 0100 - 3.0

TOGRAM
ght - Plus
k - Minus

MT. WILSON
DELTAY=17.4
DELTAX=14.0

MAGNETOGRAM
Solid - Plus
Dotted - Minus

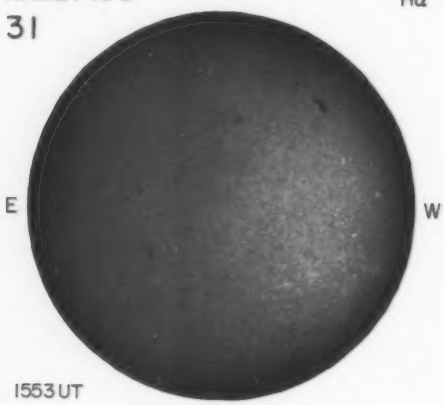


Levels
± 5
± 10
± 20
± 40
± 80

17.08 - 18.54 UT

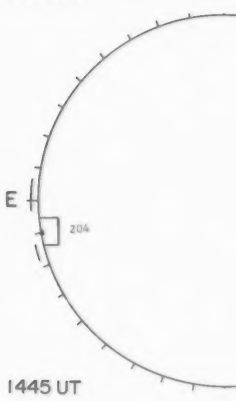
RAMEY AFB

31



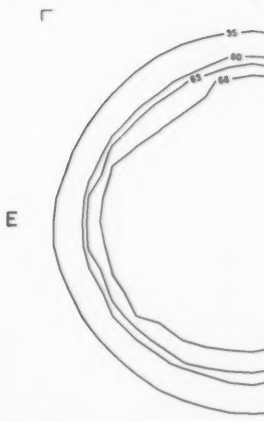
1553 UT

BOULDER

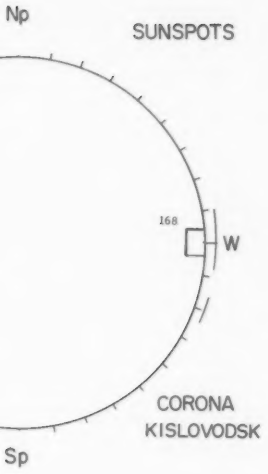


1445 UT

NELC LA POSTA



1703 UT


Np
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MCMATH REGION 13125 CMP DATE 1.0

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	5	13125	N19 W62	146	200	2.5								

MCMATH REGION 13121 CMP DATE 1.4

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	2	13121	S04 W16	139	100	1.0								

MCMATH REGION 13118 CMP DATE 2.0

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	1	13118	S27 E05	132	100	1.0								

MCMATH REGION 13129 CMP DATE 2.3

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	6	13129	N10 W56	128	100	1.5								

MCMATH REGION 13116 CMP DATE 2.4

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	7	31	13116	S03 E25	127	200	2.0								
74	8	1	13116	S03 E10	127	100	1.5								
74	8	2	13116	S03 W03	126	100	1.0								

MCMATH REGION 13123 CMP DATE 2.4

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	4	13123	S13 W27	129	200	1.0								

MCMATH REGION 13109 CMP DATE 2.6 RETURN OF REGION 13051* ROTATION 2

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	7	28	13109	S16 E66	126	200	1.0								
74	7	29	13109	S16 E53	126	200	1.0								
74	7	30	13109	S17 E40	126	100	1.0								
74	7	31	13109	S17 E27	125	100	1.0								
74	8	1	13109	S16 E13	124	100	1.0								

MCMATH REGION 13110 CMP DATE 2.8 RETURN OF REGION 13051* ROTATION 2

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	7	28	13110	S12 E69	123	300	1.0								
74	7	29	13110	S12 E55	124	300	2.0								
74	7	30	13110	S12 E43	123	200	1.5								
74	7	31	13110	S11 E30	122	200	1.5								

MCMATH REGION 13130 CMP DATE 3.7

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	6	13130	N54 W38	110	100	1.5								

MCMATH REGION 13133 CMP DATE 5.1

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	8	13133	N17 W47	90	100	1.0								

MCMATH REGION 13112 CMP DATE 5.5

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	7	30	13112	S12 E85	81	300	2.0								
74	7	31	13112	S12 E68	84	400	2.5								
74	8	1	13112	S12 E51	86	300	2.5								
74	8	2	13112	S12 E38	85	200	2.5								
74	8	3	13112	S12 E23	86	200	1.0								
74	8	4	13112	S12 E13	85	300	1.0								

*An asterisk beside the "Return of Region" number indicates that the new region is only part of the area of the old region.

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MCMATH REGION 13119 CMP DATE 6.7 RETURN OF REGION 13050 ROTATION 3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	1	13119	N07 E75	62	400	1.0									
74	8	2	13119	N07 E61	62	700	1.5									
74	8	3	13119	N07 E46	63	600	2.0									
74	8	4	13119	N08 E30	68	500	1.5									
74	8	5	13119	N09 E15	69	500	1.5									
74	8	6	13119	N10 E02	70	500	1.0									
74	8	7	13119	N10 W12	69	600	1.0									
74	8	8	13119	N10 W26	69	500	1.0									
74	8	9	13119	N10 W39	69	500	1.0									
74	8	10	13119	N10 W51	68	500	1.0									

MCMATH REGION 13142 CMP DATE 7.1

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	12	13142	N38 W71		100	1.0									

MCMATH REGION 13120 CMP DATE 7.3 RETURN OF REGION 13068 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	1	13120	S15 E80	57	800	2.0									
74	8	2	13120	S15 E66	57	1200	2.0									
74	8	3	13120	S15 E51	58	1100	2.5									
74	8	4	13120	S14 E38	60	1100	2.5									
74	8	5	13120	S15 E24	60	1300	2.5									
74	8	6	13120	S15 E10	62	1100	2.0		S12 E13				B	0	1	AXX
74	8	7	13120	S15 W03	60	900	2.0									
74	8	8	13120	S15 W19	61	700	2.0									
74	8	9	13120	S15 W31	61	700	2.0									
74	8	10	13120	S15 W45	62	700	1.5									
70	80	12	13120	S14 W70	62	500	1.0									

MCMATH REGION 13132 CMP DATE 7.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	7	13132	N34 W04	61	100	1.0									

MCMATH REGION 13134 CMP DATE 7.9

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	8	13134	S05 W10	53	100	1.5									
74	8	9	13134	S05 W23	53	100	1.0									

MCMATH REGION 13143 CMP DATE 8.0

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	12	13143	S16 W60		100	1.0									

MCMATH REGION 13122 CMP DATE 8.5

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	2	13122	S13 E85	38	300	2.0									
74	8	3	13122	S13 E69	40	200	2.0		S11 E63				B	0	2	AXX
74	8	4	13122	S13 E54	44	300	1.5									
74	8	5	13122	S13 E40	44	200	2.0									
74	8	6	13122	S13 E26	46	100	1.0									

MCMATH REGION 13135 CMP DATE 8.5

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	8	13135	S15 W02	45	100	1.0									

MCMATH REGION 13150 CMP DATE 10.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	13	13150	N15 W43	22	200	2.0									

MCMATH REGION 13126 CMP DATE 10.4

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	5	13126	N07 E64	20	200	1.0									

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MCMATH REGION 13145 CMP DATE 10.5

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	12	13145	N07 W26	19	200	2.0
74	8	13	13145	N07 W40	19	200	2.0
74	8	14	13145	N07 W52	19	100	1.0
74	8	15	13145	N06 W67	20	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS

MCMATH REGION 13159 CMP DATE 10.9

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	16	13159	N16 W75	14	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS

MCMATH REGION 13131 CMP DATE 11.1

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	6	13131	N10 E60	12	200	1.5
74	8	7	13131	N10 E47	10	100	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS

MCMATH REGION 13124 CMP DATE 11.2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	4	13124	S09 E88	10	700	2.0
74	8	5	13124	S10 E75	9	3500	3.5
74	8						
74	8	6	13124	S10 E62	10	3400	3.5
74	8						
74	8	7	13124	S10 E48	9	3500	3.0
74	8						
74	8						
74	8	8	13124	S10 E34	9	3100	3.0
74	8						
74	8	9	13124	S10 E21	9	3200	3.0
74	8						
74	8	10	13124	S08 E08	9	3200	3.5
74	8						
74	8	11					
74	8						
74	8	12	13124	S08 W18	11	2700	3.0
74	8						
74	8	13	13124	S08 W32	11	2400	3.0
74	8						
74	8	14	13124	S08 W44	11	2700	2.5
74	8						
74	8						
74	8	15	13124	S08 W60	13	2700	2.5
74	8						
74	8	16	13124	S08 W73	12	2700	2.0
74	8						
74	8	17	13124	S08 W87	12	600	1.0

RETURN OF REGION 13057 ROTATION 2

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
19448	S09 E74	16	(AP)	4 B	110	2	HSX
19448	S10 E65	17	(AP)	4 B	270	2	HHX
19449	S07 E70	4	(BP)	3 B	90	7	CAO
19448	S09 E48	18	(AP)	5 B	290	3	HHX
19449	S07 E61	5	(BP)	3 B	100	10	DAO
19448	S09 E38	18	(AP)	5 B	280	7	CHO
19451	S13 E46	10	(AP)	1 B	0	1	AXX
19449	S06 E52	4	(BP)	4 B	80	7	CAO
19448	S09 E25	18	(BP)	6 B	260	23	HHX
19449	S07 E38	5	(BP)	4 B	50	7	CSO
19448	S09 E14	17	(BP)	5 B	310	9	JSI
19449	S07 E25	6	(BP)	4 B	60	1	HSX
19448	S09 W01	19	(AP)	4 B	200	12	HHX
19449	S07 E11	7	(BP)	4 B	30	6	CSO
19448	S08 W10	15	(BP)	5			
19449	S07 W03	8	(BP)	3			
19448	S08 W28	20	(AP)	5			
19449	S06 W15	7	(BP)	4			
19448	S08 W42	19	(AP)	5 B	190	3	HHX
19449	S07 W32	9	(BP	4 B	50	5	HSX
19448	S08 W57	20	(AP)	5 B	230	3	HHX
19449	S07 W46	9	(AP)	3 B	190	3	HHX
	S08 W41			B	30	5	HHX
19448	S08 W69	21	(AP)	5 B	230	1	HHX
19449	S07 W58	10	(AP)	3 B	30	1	HRX
19448	S08 W88	24	(AP)	3 B	180	1	HSX
19449	S07 W74	10	(AP)	2 B	10	1	AXX

MCMATH REGION 13146 CMP DATE 11.5

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	12	13146	N24 W14	7	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS

MCMATH REGION 13152 CMP DATE 12.1

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	14	13152	S11 W32	359	400	2.0
74	8						
74	8	15	13152	S11 W45	358	200	2.0
74	8	16	13152	S11 W59	358	200	1.5
74	8	17	13152	S11 W72	357	200	2.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
19458	S10 W35	358	(BF)	2	B	50	5	HSX
	S11 W30				B	20	6	DKO
19458	S10 W46	358	(AF)	2	B	0	2	AXX

MCMATH REGION 13127 CMP DATE 12.6

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	6	13127	S20 E85	348	1400	3.5
74	8	7	13127	S19 E69	349	1600	3.0
74	8	8	13127	S19 E54	350	1300	3.0
74	8	9	13127	S19 E41	350	1400	3.0
74	8	10	13127	S19 E28	350	1200	3.0
74	8	12	13127	S18 E01		1100	3.5
74	8	13	13127	S18 W13	352	900	3.0
74	8	14	13127	S18 W25	352	800	3.0
74	8	15	13127	S18 W39	352	900	2.5
74	8	16	13127	S17 W52	351	700	2.5
74	8	17	13127	S18 W65	350	500	1.5
74	8	18	13127	S18 W76	350	400	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
19450	S19 E80	347		B		30	1	HSX
19450	S19 E66	351	(BF)	3	B	10	4	BXO
19450	S18 E53	351	BF)	2	B	10	2	AXX
19456	S19 W11	348	(AF)	1	B	0	2	AXX

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MCMATH REGION 13140 CMP DATE 12.6

				CALCIUM FLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	10	13140	N06 E25	353	200	2.5									
74	8	12	13140	N07 E01		200	1.0									
74	8	13	13140	N07 W13	352	200	1.5									
74	8	14	13140	N07 W25	352	100	1.5									
74	8	15	13140	N07 W40	353	100	1.5									
74	8	16	13140	N07 W53	352	200	1.0									
74	8	17	13140	N06 W67	352	200	1.5									

MCMATH REGION 13128 CMP DATE 12.9 RETURN OF REGION 13063 ROTATION 2

				CALCIUM FLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	6	13128	S06 E95	349	1000	1.5									
74	8	7	13128	S06 E70	348	1700	2.5									
74	8	8	13128	S06 E55	349	1400	2.5		S06 E51				B	80	7	CAO
74	8	9	13128	S08 E43	348	1400	2.5									
74	8	10	13128	S08 E30	348	1900	2.5									
74	8	12	13128	S06 E05		1700	2.5									
74	8	13	13128	S08 W10	349	1600	2.0		S06 W14				B	0	1	AXX
74	8	14	13128	S09 W21	348	1500	2.0									
74	8	15	13128	S09 W36	349	1100	2.0									
74	8	16	13128	S09 W50	349	1100	2.0									
74	8	17	13128	S09 W63	348	700	2.0									

MCMATH REGION 13136 CMP DATE 13.4

				CALCIUM FLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	9	13136	S08 E54	337	200	3.0	19452	S07 E54	338	(AF)	2	R	10	1	HRX
74	8	10	13136	S08 E40	338	400	3.0	19452	S07 E39	340	(BF)	3	B	20	5	CSO
74	8	11						19452	S07 E25	341	(D)	5				
74	8	12	13136	S07 E14	339	1000	3.5	19452	S06 E11	341	(BP)	5				
74	8	13	13136	S06 W02	341	1200	3.5	19452	S06 W03	340	(BP)	5	B	200	26	CSO
74	8	14	13136	S06 W14	341	1300	3.5	19452	S05 W16	339	(BP)	5	B	200	19	DSO
74	8	15	13136	S06 W28	341	1300	3.5	19452	S04 W32	344	(AP)	5	B	200	7	HSX
74	8	16	13136	S06 W42	341	1400	3.0	19452	S04 W47	343	(BP)	5	B	170	9	CSX
74	8	17	13136	S06 W56		2000	3.0	19452	S04 W59	343	(AP)	5	B	600	2	HHX
74	8	18	13136	S05 W67	341	1800	3.0	19452	S03 W72	344	(AP)	5	B	120	1	HSX
74	8	19	13136	S05 W80	341	1000	2.5	19452	S03 W89	348	AP					

MCMATH REGION 13137 CMP DATE 13.6

				CALCIUM FLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	9	13137	N09 E52	339	200	1.5									
74	8	10	13137	N08 E40	338	300	2.0									

MCMATH REGION 13157 CMP DATE 13.6

				CALCIUM FLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	15	13157	N07 W26	339	200	1.5									
74	8	16	13157	N07 W40	339	200	2.0									
74	8	17	13157	N07 W55	340	300	2.0									
74	8	18	13157	N07 W66	340	300	2.0									
74	8	19	13157	N07 W80	341	200	1.5									

MCMATH REGION 13147 CMP DATE 13.7

				CALCIUM FLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	12	13147	S17 E16	337	600	2.5	19455	S17 E14	338	(AF)	2				
74	8	13	13147	S17 E02	337	700	2.5	19455	S18 W01	339	(BF)	2				
74	8	14	13147	S17 W10	337	500	2.5		S19 W08				B	10	4	AXO
74	8	15	13147	S17 W24	337	600	2.5	19455	S17 W29	340	(BP)	2	B	0	9	BXO
74	8	16	13147	S17 W33	338	600	2.5	19455	S17 W42	338	(BF)	2	B	0	1	AXX
74	8	17	13147	S17 W55	340	1100	3.0	19455	S17 W53	338	(BP)	3	B	450	13	DAO
74	8	18	13147	S17 W66	340	1000	2.5	19455	S18 W67	339	(BF)	4	B	130	6	DSO
74	8	19	13147	S17 W78	339	600	2.0	19455	S18 W77	336	(AF)	2	R	10	1	HSX

MCMATH REGION 13153 CMP DATE 13.7

				CALCIUM FLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	14	13153	S36 W10	337	100	1.0									

MCMATH REGION 13138 CMP DATE 14.0

				CALCIUM FLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	9	13138	N19 E58	333	100	2.0									

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MCMATH REGION 13141 CMP DATE 14.5

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	10	13141	N09 E56	322	400	1.0
74	8	11					
74	8	12	13141	N09 E30	323	500	2.5
74	8	13	13141	N10 E16	323	400	2.5
74	8	14	13141	N10 E04	323	400	2.5
74	8	15	13141	N10 W11	324	400	3.0
74	8	16	13141	N10 W27	326	1000	4.0
74	8	17	13141	N10 W41	326	1400	3.5
74	8						
74	8	18	13141	N10 W52	326	1400	3.5
74	8						
74	8	19	13141	N10 W65	326	1300	3.5
74	8						
74	8	20	13141	N10 W80	328	1400	2.5
74	8	21	13141	N11 W90	324	500	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
19454	N09 E43	323	(BP)	2				
19454	N09 E28	324	(BP)	2				
19454	N09 E16	321	(AF)	1	B	10	6	BXO
	N09 E05				B	10	5	BXO
19454	N09 W16	328	(AP)	2	B	10	8	BXO
19454	N10 W30	326	(BP)	4	B	70	28	CAI
19454	N12 W43	329	(AP)	2	B			
19454	N09 W41	326	(R)	4		90	9	DSO
19459	N12 W56	328	(BP)	3				
19454	N10 W55	327	(B)	4	B	140	6	CSO
19459	N13 W70	329	(B)	2				
19454	N10 W69	327	(BP)	3	B	90	3	DSO
19454	N08 W87	333	(AP)	3	B	10	1	AXX

MCMATH REGION 13154 CMP DATE 14.9

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	14	13154	N25 E05	322	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13155 CMP DATE 15.3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	14	13155	N42 E11	316	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13139 CMP DATE 15.7

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	9	13139	N07 E82	309	900	3.5
74	8	10	13139	N08 E74	304	1000	3.0
74	8	11					
74	8	12	13139	N08 E45	308	600	2.5
74	8	13	13139	N08 E28	311	700	2.0
74	8	14	13139	N09 E16	311	500	2.0
74	8	15	13139	N10 E02	311	400	2.0
74	8	16	13139	N10 W12	311	400	2.5
74	8	17	13139	N10 W27	312	400	2.5
74	8	18	13139	N10 W38	312	400	2.5
74	8	19	13139	N10 W50	311	500	2.5
74	8	20	13139	N10 W65		500	1.5
74	8	21	13139	N10 W78	312	300	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
19453	N09 E80	312	(AP)	2				
19453	N08 E67	312	(AP)	2	B	10	1	CSX
19453	N07 E54	312	(AP)	3				
19453	N08 E39	313	(BP	3				
19453	N09 E25	312	(AP)	3	B	10	2	AXX
19453	N09 E10	313	(AP)	2	B	20	2	AXX
19453	N09 W01	313	(BP)	2	B	0	1	AXX
19453	N10 W18	314	(AP)	1	B	10	1	AXX

MCMATH REGION 13148 CMP DATE 16.9

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	12	13148	S14 E59	294	400	2.0
74	8	13	13148	S14 E45	294	500	2.0
74	8	14	13148	S14 E33	294	500	2.0
74	8	15	13148	S14 E18	295	400	2.0
74	8	16	13148	S14 E04	295	400	2.0
74	8	17	13148	S13 W11	296	400	1.5
74	8	18	13148	S14 W22	296	600	2.0
74	8	19	13148	S14 W34	295	600	2.0
74	8	20	13148	S14 W50		400	1.5
74	8	21	13148	S14 W63	297	400	1.5

RETURN OF REGION 13067 ROTATION 2

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13156 CMP DATE 17.4

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	14	13156	N09 E39	288	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13160 CMP DATE 17.7

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	16	13160	S13 E15	284	200	2.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13149 CMP DATE 18.0

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	12	13149	S11 E72	281	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13167 CMP DATE 19.1

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	19	13167	N05 W05	266	300	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

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MCMATH REGION 13161 CMP DATE 19.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	16	13161	S54 E36	263	100	1.5									

MCMATH REGION 13175 CMP DATE 19.5

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	20	13175	S12 W13	261	300	3.0	19461	S11 W16	262	(B)	1				
74	8	21	13175	S12 W27	261	700	3.0	19461	S11 W29	260	(BP)	4	B	30	16	CRI
74	8	22	13175	S12 W40	261	1100	4.0	19461	S12 W41	261	(BP)	4				
74	8	23	13175	S12 W55	262	1000	3.5	19461	S12 W54	261	(BF)	4				
74	8	24	13175	S12 W67	252	1400	3.5	19461	S12 W67	261	(BF)	3	B	20	7	BXO
74	8	25	13175	S12 W79	260	1400	3.0									

MCMATH REGION 13172 CMP DATE 19.6

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	21	13172	N09 W25	259	100	2.0									

MCMATH REGION 13151 CMP DATE 20.2 RETURN OF REGION 13088 ROTATION 8

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	13	13151	N13 E83	256	800	2.5	19457	S13 E79	258	(AP)	3	B	220	1	HHX
74	8								S15 E85				B	220	1	HHX
74	8	14	13151	S13 E72	255	900	2.5	19457	S13 E65	258	(AP)	4	B	140	2	HHX
74	8	15	13151	S13 E57	256	1300	2.5	19457	S13 E52		(AP)	5				
74	8	16	13151	S14 E44	255	1400	2.5	19457	S14 E33	258	(AP)	5	B	210	1	HSX
74	8	17	13151	S13 E32	253	1300	2.5	19457	S14 E27	258	(AP)	5	B	330	1	HHO
74	8	18	13151	S13 E22	252	1300	2.5	19457	S14 E14	258	(AP)	5	B	180	1	HSX
74	8	19	13151	S13 E09	252	1200	2.5	19457	S14 E01	258	(AP)	5	B	170	1	HSX
74	8	20	13151	S13 W03	251	1000	2.0	19457	S14 W12	258	(AP)	5	B	200	12	HSX
74	8	21	13151	S13 W16	250	900	2.0	19457	S15 W24	256	(AP)	5	B	180	1	HSX
74	8	22	13151	S13 W29	250	1000	2.0	19457	S15 W36	256	(AP)	5				
74	8	23	13151	S13 W42	249	800	2.0	19457	S15 W49	256	(AP)	4				
74	8	24	13151	S13 W54	249	800	2.5	19457	S15 W62	256	(AP)	4	B	160	1	HSX
74	8	25	13151	S15 W66	247	400	1.5	19457	S15 W75	256	(AP)	3				
74	8	26	13151	S16 W75	243	100	1.0									

MCMATH REGION 13178 CMP DATE 20.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	22	13178	N40 W29	250	100	1.5									

MCMATH REGION 13164 CMP DATE 20.5

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	17	13164	S05 E40	245	200	1.0									
74	8	18	13164	S05 E27	247	200	1.0									
74	8	19	13164	S04 E15	246	400	2.5									
74	8	20	13164	S04 W00		300	2.5									
74	8	21	13164	S04 W13	247	200	2.5									
74	8	22	13164	S04 W27	248	200	1.0									
74	8	23	13164	S04 W42	249	100	1.0									
74	8	24	13164	S04 W55	250	100	1.0									

MCMATH REGION 13182 CMP DATE 20.5

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	23	13182	S40 W41	248	200	1.0									

MCMATH REGION 13163 CMP DATE 21.4

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	17	13163	N47 E50	235	300	1.5									

MCMATH REGION 13171 CMP DATE 21.4

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	20	13171	N03 E12		100	2.0									

MCMATH REGION 13179 CMP DATE 21.7

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	8	22	13179	N42 W11	232	100	1.5									

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MCMATH REGION 13162 CMP DATE 22.2

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	16	13162	N53 E73	226	100	1.5
74	8	17	13162	N53 E60	225	100	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13165 CMP DATE 22.7 RETURN OF REGION 13084 ROTATION 3

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	17	13165	S13 E65	220	1000	1.0
74	8	18	13165	S13 E52	222	1100	1.5
74	8	19	13165	S13 E40	221	1500	2.0
74	8	20	13165	S13 E27		1400	2.0
74	8	21	13165	S12 E15	219	1400	2.0
74	8	22	13165	S12 E03	218	1200	2.0
74	8	23	13165	S12 W10	217	1000	2.0
74	8	24	13165	S12 W20	215	1200	2.0
74	8	25	13165	S12 W31	212	1700	2.0
74	8	26	13165	S12 W43	211	1500	2.0
74	8	27	13165	S13 W58	212	1200	2.0
74	8	28	13165	S13 W68	210	800	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13166 CMP DATE 24.4

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	18	13166	N10 E81	193	700	1.5
74	8	19	13166	N10 E68	193	1000	2.0
74	8	20	13166	N12 E53		600	2.0
74	8	21	13166	N11 E37	197	400	2.0
74	8	22	13166	N11 E24	197	400	2.0
74	8	23	13166	N10 E10	197	300	2.0
74	8	24	13166	N10 W03	198	200	2.0
74	8	25	13166	N10 W15	196	400	1.5
74	8	26	13166	N10 W28	196	300	2.0
74	8	27	13166	N09 W43	197	100	1.5
74	8	28	13166	N09 W56	198	100	1.5
74	8	29	13166	N09 W71	198	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13186 CMP DATE 25.1

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	26	13186	N22 W19	187	200	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13193 CMP DATE 25.2

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	29	13193	N19 W59	186	100	2.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13183 CMP DATE 25.4

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	24	13183	N58 E12	183	100	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13184 CMP DATE 25.5

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	24	13184	N18 E13	182	100	1.5
74	8	25	13184	N18 W01	182	200	1.0
74	8	26	13184	N18 W13	181	100	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 13168 CMP DATE 25.6

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
74	8	19	13168	N02 E86	175	400	3.0
74	8	20	13168	N03 E70	178	1400	3.5
74	8	21	13168	N03 E56	178	1400	3.5
74	8	22	13168	N03 E43	178	1200	3.5
74	8	23	13168	N03 E28	179	1000	3.5
74	8	24	13168	N03 E15	180	1000	3.5
74	8	25	13168	N03 E01	180	800	3.5
74	8	26	13168	N03 W12	180	800	3.0
74	8	27	13168	N03 W26	180	900	3.0
74	8	28	13168	N03 W39	181	900	3.0
74	8	29	13168	N03 W55	182	800	2.5
74	8	30	13168	N03 W67	182	700	2.5
74	8	31	13168	N03 W80	181	700	2.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
13460	N01 E75	134	(AP)	3	P	30	1	HSX
13460	N02 E62	134	(AP)	4	B	110	1	HSX
13460	N02 E49	183	(AP)	4	B	90	3	HAX
13460	N02 E37	183	(AP)	4				
13460	N03 E24	183	(BP)	5				
13460	N02 E12	182	(BP)	5	B	50	8	CAO
13460	N02 W02	183	(BP)	4				
13460	N02 W15	183	(AP)	4				
13460	N02 W32	184	(AP)	4				
13460	N02 W41	183	(AP)	4				
13460	N02 W59	185	(AP)	4				
13460	N02 W69	184	(AP)	4				
13460	N02 W84	198	(AP)	2				

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MCMATH REGION 13170 CMP DATE 25.6 RETURN OF REGION 13095 ROTATION 4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	19	13170	S10 E82	179	1000	2.0								
74	8	20	13170	S10 E68		1000	1.5								
74	8	21	13170	S10 E55	179	1100	2.0								
74	8	22	13170	S10 E40	181	1000	1.5								
74	8	23	13170	S10 E27	180	900	2.0								
74	8	24	13170	S10 E14	181	800	2.0								
74	8	25	13170	S10 E01	180	1200	2.0								
74	8	26	13170	S10 W12	180	1200	2.0								
74	8	27	13170	S09 W27	181	800	2.0								
74	8	28	13170	S09 W40	182	700	2.0								
74	8	29	13170	S09 W55	182	700	2.0								
74	8	30	13170	S09 W67	182	500	1.5								

MCMATH REGION 13191 CMP DATE 25.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	28	13191	N12 W38	180	200	1.5								
74	8	29	13191	N11 W54	181	200	1.5								
74	8	30	13191	N11 W65	180	200	1.5								

MCMATH REGION 13174 CMP DATE 27.1 RETURN OF REGION 13101 ROTATION 4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	21	13174	S17 E76	158	800	1.5								
74	8	22	13174	S15 E63	158	1000	1.5								
74	3	23	13174	S15 E49	158	1000	1.5								
74	8	24	13174	S15 E35	160	1100	2.0								
74	8	25	13174	S15 E21	160	1230	2.5								
74	8	26	13174	S15 E08	160	1500	2.5								
74	8	27	13174	S15 W05	159	1400	2.5								
74	8	28	13174	S15 W19	161	1500	2.5								
74	8	29	13174	S15 W33	160	1200	2.5								
74	8	30	13174	S15 W45	160	1000	2.5								
74	8	31	13174	S15 W58	159	900	2.0								
74	9	1	13174	S16 W70		500	1.0								

MCMATH REGION 13194 CMP DATE 27.3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	29	13194	N09 W31	158	300	3.0								
74	8	30	13194	N09 W44	159	300	3.0								
74	8	31	13194	N09 W57	158	300	2.5								
74	9	1	13194	N08 W70		100	1.0								

MCMATH REGION 13201 CMP DATE 27.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	31	13201	N43 W52	153	200	1.5								

MCMATH REGION 13181 CMP DATE 27.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	22	13181	S08 E69	152	100	1.0								

MCMATH REGION 13206 CMP DATE 27.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	9	1	13206	N31 W63		100	2.5								

MCMATH REGION 13197 CMP DATE 27.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	29	13197	N38 W25	152	100	1.5								

MCMATH REGION 13195 CMP DATE 28.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NC.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	29	13195	S05 W14	141	100	2.0								
74	8	30	13195	S05 W27	142	100	1.0								
74	8	31	13195	S05 W40	141	100	1.0								

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MCMATH REGION 13188 CMP DATE 29.8°

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	26	13188	N42 E44	124	200	1.0								

MCMATH REGION 13192 CMP DATE 30.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	28	13192	S02 E25	117	100	2.5								

MCMATH REGION 13189 CMP DATE 30.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	26	13189	S20 E51	117	100	1.5								
74	8	27	13189	S20 E38	116	100	1.0								

MCMATH REGION 13198 CMP DATE 31.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	8	30	13198	N21 E16	99	100	1.5								
74	8	31	13198	N21 E03	98	100	2.0								

The column marked STA is inserted to indicate the source of data for sunspot area, count and classification.
B = Boulder M = Manila R = Ramey

Note:
Region 13127 is probably mostly new plage which has formed in the location of part of old plage 13062 of the preceding rotation.
The new part of region 13128 is the part of the plage which is situated closest to the equator.
No calcium spectroheliogram was obtained at the McMath-Hulbert Observatory on August 11, 1974.
Sunspot observations were obtained at Mt. Wilson Observatory on all days in August 1974.

DAILY CALCIUM PLAGE INDEX

AUGUST 1974

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
74	8	1	12.6	74	8	11	*	74	8	21	11.8
74	8	2	10.9	74	8	12	23.6	74	8	22	13.2
74	8	3	9.4	74	8	13	21.3	74	8	23	11.3
74	8	4	7.2	74	8	14	19.6	74	8	24	12.3
74	8	5	8.1	74	8	15	16.9	74	8	25	12.3
74	8	6	10.6	74	8	16	16.6	74	8	26	11.5
74	8	7	12.1	74	8	17	14.9	74	8	27	8.6
74	8	8	13.6	74	8	18	12.1	74	8	28	7.7
74	8	9	16.8	74	8	19	11.5	74	8	29	5.9
74	8	10	21.7	74	8	20	10.0	74	8	30	4.4
								74	8	31	2.7

* NO OBSERVATIONS

SUDDEN IONOSPHERIC DISTURBANCES

AUGUST 1974

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
01	2014	2054	2024	1	5	3		1	2	1	8		2011	13095
01	2242	2359	2257	1-	1				1				2243E	13095
02	1531	1800	1555	1-	3						3		1530	13095
04	1240	1330	1248	1-	3				2		1		1239	13095
04	1350	1445	1400	1-	3				2		1		1355	13095
06	0521	0602	0525	1-	1				1				0519	13124
07	0532U	0607	0540	1-	3			2					0536	13124
10	1451	1530D	1501	1-	1						1		1448	13139
17	0433	0526	0439	1-	1				1				0433E	13136
17	1610	1645	1617	1-	1				1				1610E	13147
17	1712	1742	1722U	1-	1						1		1711E	13152
21	0837	0910	0840	1-	1			1					0835	13151
26	0348	0503	0358	1-	1				1				*	

PERIODS OF NO OBSERVATIONS:

DATE	TIME (UT) and STATION
01-03	0000-2037 A38 (17 kHz)
01-04	0000-2400 A21 (24 kHz)
01	0000-2400 A30, 0748-0833 UM (16 kHz)
02	0000-2400 A30, 1355-1715 UM (17 kHz)
03-08	1630-2400 PO
03	0758-1117 UM (16 kHz), 2005-2115 UM (16 kHz)
04	0745-1109 UM (16 kHz)
06	0746-0829 UM (16 kHz), 1007-1315 UM (16 kHz)
07	0800-1021 UM (16 kHz)
08	0812-1209 UM (16 kHz), 2213-2400 BO, 2005-2022 TM
09	0530-0616 UM (13 kHz), 1402-1706 UM (17 kHz)
10-12	2327-1130 MC
11	0110-0245 TM, 0740-0819 UM (16 kHz)
12-14	1830-2330 A35 (22 kHz)
12	0045-0600 A35 (34 kHz), 1357-1416 TM
13	1215-1345 UM (16 kHz), 2022-2200 BO
16	1400-1735 UM (17 kHz)
18-19	1900-1324 TM
20-31	1415-2400 PO
20	0008-0225 UM (13 kHz), 1008-1328 UM (16 kHz), 1527-1531 TM, 2228-2234 TM
21-31	1530-2400 PO
21	0500-1520 SC (18 kHz), 1658-1823 UM (13 kHz), 1858-1951 UM (13 kHz)
22-26	1600-2200 A38 (17 kHz)
23-25	0000-2400 A37
23	0752-1132 UM (16 kHz), 1355-1745 UM (17 kHz)
24-31	0000-2400 A29
27	0755-0914 UM (16 kHz), 1006-1355 UM (16 kHz)
28	0753-1114 UM (16 kHz)
29	0754-1102 UM (16 kHz), 1234-1320 MC
30	1415-1753 UM (17 kHz)
31	0400-2400 A38 (17 kHz), 0755-0855 UM (16 kHz)

STATIONS REPORTING FOR AUGUST 1974

AAAVSO (A1)(SEA) (A1, A19, A21, A26, A29, A30, A31, A35, A36, A37, A38)(SES) (A31)(SWF)
BOULDER (BO) (SCNA, SEA)
DARMSTADT (DA) (SWF)
DEBRE ZEIT (DE) (SPA)
HERSTMONCEUX (HC) (SEA)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
HUANCAYO (HU) (SWF)
INUBO (IN) (SPA)
JOHANNESBURG (JH) (SPA)
KULA, MAUI (KL) (SPA)
MANILA (MA) (SCNA)
MCMATH (MC) (SWF, SCNA)
PANSKA VES (PU) (SWF, SFA, SFS)
POITIERS (PO) (SEA)
PRESTON (LO) (SFA)
SAO PAULO (UM) (SPA, SES)
SOFIA (SF) (SES)
ST. CLOUD (SC) (SES)
TABLE MOUNTAIN (TM) (SPA, LF-SPA)
TORINO (TN) (SPA)
TORTOSA (TS) (SEA)
UPICE (UI) (SFA)

SIDS BY McMATH REGION

DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
REGION																															
95	2	1		2																											
24						1	1																								
36																	1														
39										1																					
47																	1														
51																					1										
52																	1														
X-RAY																															
UNKNOWN																															
NO FP																										1					

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

AUGUST 1974

AUG 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
01	0000	1015	MANI														
	0000	0230	BOUL														
	0000	0738	CULG							0320	0322	1					IIIG
	0415	1845	WEIS														
	0445	1835	DURN														
	0735	1310	DWIN							0930	1030	1					IN
	0939	2359	SGMR														
	1245	2246	HARV														
	2039	2400	CULG							2116.5	2352						IIIN,W
	2142	2400	MANI														
			CULG				2246.5	2247.5	1								FASTDRIFT
			CULG							2305	2350	1					I
			CULG							2351		1					IIIB,U
	1200	2400	BOUL							2351.4	2352.0	1					III
02	0000	0230	BOUL														
	0000	0801	MANI														
	0000	0738	CULG							0121.5	0655						IIIN,W
			CULG							0228.5	0231						IIIG,W
	0418	1242	WEIS														
	0445	1826	DURN														
			CULG							0655		1					IIIB
	0813	1440	DWIN														
	0820	1016	MANI														
	0941	2357	SGMR														
	1200	2400	BOUL														
	1246	2245	HARV														
	1249	1844	WEIS														
	2039	2400	CULG							2106.5	2352	1					IIIN
03	0000	0230	BOUL														
	0005	1016	MANI														
	0000	0738	CULG							0012.5	0641.5	1					IIIN
			CULG							0228	0445.5						IN,W
			CULG							0424	0426.5	1					IIIG,U
	0940	2358	SGMR														
	0413	1745	WEIS							1042.8	1043.0	1					IIIB
	1245	2245	HARV														
			WEIS							1557.2	1557.8	1					IIIG
	1312		DURN							1610.1	1610.6	1					IIIG
	2039	2400	CULG							2108	2355.5	1					IIIN
	2143	2400	MANI														
	1200	2400	BOUL										2209.0	2209.3	1		III
			BOUL										2229.6	2229.9	1		III
			CULG							2230		1					IIIB
			BOUL							2346.3	2346.5	1	2346.3	2346.5	1		III
04	0000	0230	BOUL														
	0000	1016	MANI														
	0000	0738	CULG							0001.5	0704						IIIS,W
	0448	1411	DURN							0608.9	1411 0	1					I,OC,N
	0942	2356	SGMR														
	0730	1847	WEIS							1034.2	1034.6	1					IIIG
	1200	2400	BOUL														
	1245	2245	HARV														
	2038	2400	CULG							2111.5	2248						IIIS,W
	2143	2400	MANI														
			CULG							2301	2353.5	1					IIIN
05	0000	1017	MANI														
	0000	0230	BOUL														
	0000	0038	CULG							0011	0028	1					IIIN
	0051	0738	CULG							0055	0512.5	1					IIIN
	0424	1242	WEIS														
			CULG							0529	0721.5						IIIN,W
	0829	1640	DURN														
	0944	2355	SGMR														
	1245	2245	HARV														
	1250	1540	WEIS														
	1200	2400	BOUL							1548.7	1548.9	1	1548.7	1548.9	1		III
	1630	1836	WEIS														
	2038	2400	CULG							2105	2400						IIIS,W
	2143	2400	MANI														
			BOUL										2144.1	2144.4	1		III
06	0000	1017	MANI														
	0000	0637	CULG							0000	0637						IIIS,W
	0000	0230	BOUL							0006.9	0007.1	1	0006.9	0007.1	1		III
			BOUL							0021.9	0022.4	1	0021.9	0022.4	1		IIIG
			BOUL							0040.9	0041.3	1	0040.9	0041.3	1		III
	0426	0655	WEIS														
			CULG							0443		1					IIIGG
	0737	0800	WEIS														
	0822	1815	WEIS														
	0944	2353	SGMR														
	1200	2400	BOUL														
	1245	2245	HARV														
	2055	2400	CULG							2117	2355.5						IIIN,W
	2144	2400	MANI														
07	0000	1017	MANI														

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

AUGUST 1974

AUG 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
07	0000	0230	BOUL													
	0000	0649	CULG							0014	0639					IIIS,W
	0417	0629	WEIS													
			CULG							0555		1				IIIG
	0657	1829	WEIS							1331.7	1331.9	1				IIIG
			WEIS							1612.6	1613.1	1				IIIG
			WEIS							1614.8	1614.9	2				IIIB
			WEIS							1736.9	1739.0	3				IIIGG
	1245	2245	HARV							1737	1740	3	1737	1740	3	IIIGG,V
	1200	2400	BOUL							1737.6	1740.2	2	1737.6	1740.2	2	III
	0945	2352	SGMR										1737.6	1739.5	3	V
			BOUL							1829.8	1831.1	2	1829.8	1831.1	2	III
			HARV							1830	1831	3	1830	1831	3	IIIG,V
			SGMR										1830.5	1831.1	2	III
	2056	2400	CULG							2056	2357	1				IS
			CULG							2100	2349	1				IIIS
			CULG							2143	2150	1				IIIG
	2144	2400	MANI													
			BOUL							2322.6	2322.8	1	2322.6	2322.8	1	III
08	0000	1017	MANI													
	0000	0634	CULG							0002	0634					IIIS,W
			CULG				0028.5	0029	1	0028.5	0029	1				IIIG,U
	0000	0230	BOUL							0113.4	0114.0	1	0113.0	0114.0	1	IIIG
			CULG				0118.5	0119	1	0118	0119.5	1				IIIG,U
			CULG							0204		2				IIIB
			CULG				0435	0505	1							I
	0434	1317	WEIS							0539.4	0539.5	2				IIIB
			CULG				0539.5		1	0539.5		1				RS
			WEIS							0722.0	1554.8	2				IN
			WEIS							1004.7	1004.9	1				IIIG
			WEIS							1230.3	1230.5	2				IIIG
	1200	2400	BOUL							1256.9	1257.1	1				III
			WEIS							1315.8	1315.9	2				IIIB
	1448	1834	DURN							1448 E	1834 D	2				I,DC
			BOUL							1512.6	1513.0	1	1512.6	1513.0	1	III
			BOUL							1526.1	1528.4	1	1526.1	1528.4	1	IIIG
	0946	2351	SGMR										1526.4	1527.0	1	III
			SGMR										1536.7	1540.6	2	III
	1245	2245	HARV							1539	1548	2	1539	1548	2	IIIG,U
	1347	1816	WEIS							1539.6	1540.4	2				IIIG
			BOUL							1539.6	1540.0	2	1539.6	1540.0	2	IIIG
			HARV							1551	1553	3	1551	1553	3	IIIGG,V
			SGMR										1551.4	1552.9	3	III
			BOUL							1551.5	1553.2	3	1551.5	1553.2	3	IIIG
			WEIS							1551.5	1552.1	3				IIIGG
			DURN							1551.6	1552.5	2				IIIG
			WEIS							1658.5	1658.8	1				IIIB
			BOUL										1658.6	1658.9	1	III
			SGMR										1658.7	1659.2	2	III
			WEIS							1706.4	1706.8	1				IIIG
			BOUL							2022.2	2022.5	1	2022.2	2022.5	1	III
			HARV							2046	2048	3	2046	2048	3	IIIG,V
			BOUL							2046.3	2048.0	2	2046.3	2048.0	2	III
			SGMR										2046.5	2047.2	3	III
			CULG				2100	2400	1	2118.5	2400	1				IS
	2100	2400	CULG							2103	2400					IIIS,W
			CULG				2137.5	2138.5	1	2138	2138.5	2				IIIG
	2144	2400	MANI													
			CULG							2317.5		2				IIIG
09	0000	0716	CULG				0000	0711		0000	0716					IS,W
			CULG							0000	0658.5	1				IIIG,W
			CULG							0006.5	0008	2				IIIG,U
	0000	0200	BOUL							0006.9	0007.6	2	0006.9	0007.6	2	IIIG
	0000	1017	MANI										0007.0	0007.6	1	III
			CULG				0133	0139	1	0133	0142.5	2				IIIGG,U
			BOUL							0133.6	0133.9	2	0133.6	0133.9	2	IIIG
			MANI										0138.5	0138.9	1	III
			CULG							0148.5	0153.5	2				IIIGG,U
			MANI										0151.6	0151.8	1	III
			CULG							0227.5	0229	2	0228	0229	1	IIIG,V,U
			MANI										0228.0	0228.5	3	III
			CULG							0236.5	0239	1				IIIGG
			CULG							0245	0248.5	1				IIIGG
			CULG							0338	0341	2				IIIGG,V,U
			MANI										0338.6	0340.6	3	IIIG
			CULG				0416	0418	1	0413.5	0419	1				IIIGG,U
			MANI										0417.8	0418.6	1	III
			MANI										0420.7	0421.4	1	III
			CULG				0422	0423	1	0420.5	0425.5	2				IIIGG,V,U
			MANI										0422.4	0424.1	3	IIIG
			CULG							0428	0438	1				IIIGG
	0435	1826	WEIS							0436.0	1250.0	2				IN
			CULG				0445	0449	1	0445	0449	2	0445	0446	1	IIIGG,V,U
			WEIS							0445.0	0446.7	3				IIIGG
			MANI										0445.3	0446.5	3	III
	0453	1833	DURN							0453 E	1833 D	2				I,DC,C
			CULG				0455	0456.5	1	0455	0456.5	2				IIIG,U
			WEIS							0455.0	0455.5	2				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

AUGUST 1974

AUG 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
09			MANI										0455.6	0455.9	1		III
			MANI										0516.3	0516.6	1		III
			WEIS							0516.3	0516.4	1					IIIB
			CULG				0517	0519.5	1	0516	0527.5	2	0517.5	0521	1		IIIGG,V,U
			DURN				0517.4	0517.9	1	0517.4	0518.8	2					IIIG
			WEIS							0517.5	0521.2	3					IIIGG
			MANI										0517.7	0518.8	3		III
			MANI										0520.1	0523.2	1		IIIG
			WEIS							0523.0	0523.8	3					IIIG
			CULG							0611	0616.5	1					IIIGG,U
			WEIS							0612.6	0613.9	2					IIIG
			WEIS							0616.1	0616.2	1					IIIB
			MANI										0621.4	0621.9	1		III
			WEIS							0625.5	0626.3	3					IIIG
			CULG				0625.5	0632	1	0621.5	0632.5	2	0629	0629.5	1		IIIGG,V,U
			DURN							0625.7	0631.3	3					IIIGG
			WEIS							0626.8	0629.5	2					IIIG
			MANI										0629.1	0629.6	1		III
			WEIS							0631.0	0632.2	2					IIIGG
			CULG							0637.5	0645	1					IIIGG
			WEIS							0639.4	0639.7	1					IIIB
			WEIS							0640.7	0642.7	2					IIIG
			MANI										0642.5	0643.0	1		III
			CULG							0647	0650	2					IIIGG,U
			WEIS							0648.1	0649.4	2					IIIG
			MANI										0648.1	0649.8	1		IIIG
			CULG							0700	0704	1					IIIGG
			WEIS							0731.4	0731.5	1					IIIB
			WEIS							0733.4	0733.8	2					IIIG
			WEIS							0751.1	0800.8	2					IIIGG
			MANI										0752.5	0755.3	2		IIIG
			DURN							0755.9	0755.9	2					III
			MANI										0759.1	0759.3	1		III
			WEIS							0834.4	0840.4	3					IIIGG
			DURN				0837.8	0839.3	1	0837.8	0840.0	3					IIIGG
			MANI										0837.9	0838.5	2		III
			MANI										0840.0	0840.3	2		III
			WEIS							0842.4	0842.5	2					IIIB
			WEIS							0844.3	0844.4	1					IIIB
			WEIS							0850.0	0850.2	1					IIIBRS
			DURN							0850.1	0850.1	2					III
			WEIS							0927.5	0928.0	1					IIIG
			WEIS							0934.7	0935.1	3					IIIG
			WEIS							0938.4	0938.8	1					IIIG
			WEIS							0943.6	0943.8	2					IIIB
			WEIS							1003.1	1003.3	2					IIIG
			DURN							1003.2	1003.2	2					IIIRS
			WEIS							1007.6	1008.0	1					IIIB
			WEIS							1018.6	1018.8	1					IIIGRS
			WEIS							1045.6	1046.2	1					IIIG
			WEIS							1049.3	1049.9	1					IIIG
			WEIS							1117.1	1117.5	1					IIIB
	0947	2349	SGMR										1117.3	1117.5	1		III
			WEIS							1144.8	1145.8	1					IIIG
			SGMR										1145.0	1146.0	2		III
			WEIS							1154.9	1155.0	1					IIIB
			SGMR										1155.9	1156.2	1		III
			DURN							1230	1250	3					I,OC
			WEIS							1233.4	1233.9	2					IIIG
	1200	2400	BOUL							1233.5	1233.7	1					III
			SGMR										1233.7	1258.4	2		IIIG
			WEIS							1236.3	1236.7	2					IIIG
			BOUL							1236.5	1236.7	1					III
			BOUL							1258.1	1258.5	1					III
			BOUL							1303.5	1303.9	1	1303.5	1303.9	1		III
	1245	2245	HARV							1657	1658	3	1657	1658	3		IIIB
			WEIS							1657.3	1657.7	2					IIIB
			BOUL							1657.3	1657.9	2	1657.3	1657.9	2		III
			SGMR										1657.4	1658.0	2		III
			DURN							1810	1830	3					I,OC
			HARV							1935	1937	2	1937		2		IIIG
			SGMR										1935.7	1937.4	1		IIIG
	2058	2400	CULG							2058	2400	1					IIIS
			CULG				2100	2330	1	2108	2348	1					IS
			CULG				2132		1	2132	2136	2					IIIG
			HARV							2132	2133	3	2132	2133	3		IIIG
			BOUL							2132.2	2132.6	1	2132.2	2132.6	1		III
			SGMR										2132.4	2132.6	1		III
			CULG							2227.5	2228.5	1					IIIG,U
			CULG							2231	2239	2	2234	2237.5	1		IIIGG,V,U
			BOUL							2233.0	2238.1	2	2233.0	2238.1	2		III
			HARV							2235	2238	2	2235	2238	2		IIIGG
	2144	2400	MANI										2236.6	2237.1	1		III
			SGMR										2236.7	2237.3	2		III
10	0000	1017	MANI														
	0000	0200	BOUL														
	0000	0645	CULG							0008	0643	1					IIIG,N
			CULG				0038	0311	1	0026	0406	1					I
	0445	0515	WEIS														

SOLAR RADIO EMISSION
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AUG 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
10	0453	1834	DURN							0453 E	1050	1					I,DC
	0829	1835	WEIS							0836.0	1057.0	1					IN
			DURN							1013.8	1013.9	3					IIIG
	0949	2348	SGMR										1014.0	1014.8	2		III
			WEIS							1021.7	1022.9	3					IIIG
	1200	2400	BOUL							1311.3	1311.6	1					III
			SGMR										1311.5	1313.1	1		IIIG
			BOUL							1312.8	1313.1	1					III
			WEIS							1319.3	1319.8	1					IIIG
			WEIS							1320.6	1320.8	1					IIIB
			BOUL										1613.0	1613.6	1		III
	1245	2245	HARV							1753	1755	2	1753	1755	2		IIIGG
			BOUL							1753.2	1753.7	1	1753.2	1753.7	1		III
			SGMR										1753.5	1755.0	2		IIIG
			BOUL							1935.7	1935.8	1	1935.7	1935.8	1		III
			SGMR										1935.8	1936.0	2		III
	2057	2400	CULG							2057	2348	1					IIIN,U
	2144	2400	MANI														
11	0000	1017	MANI														
	0000	0200	BOUL														
	0000	0642	CULG							0024	0638						IIIS,W
			CULG							0045	0045.5	1					IIIG
	0455	1834	DURN														
			WEIS							0508.5	1304.0	1					IN
	0448	1420	WEIS							0739.7	0739.8	1					IIIB
	1244	2245	HARV														
	0949	2347	SGMR										1726.9	1727.2	1		III
			SGMR										1817.1	1817.9	1		III
	2000	2400	BOUL														
	2052	2400	CULG				2052	2358	1	2052	2400	2					IS
			CULG							2100	2101	2					IIIG,U
			SGMR										2100.6	2100.9	1		III
			CULG							2102.5	2350.5						IIIGN,W
	2145	2400	MANI														
12	0000	1017	MANI														
	0000	0200	BOUL														
			CULG							0001	0641						IIIG,N,W
			CULG							0020.5	0026	1					IIIGG,U
	0000	0642	CULG				0035	0617	1	0008	0642	1					IS
	0716	1818	WEIS							0721.0	1700.0	1					IN
	0455	1610	DURN							1200 E	1610 D	1					I,DC
	1314	2047	HARV							1715	1909	2	1715	1909	2		IIIN
	0951	2345	SGMR										1715.4	1716.1	1		III
			SGMR										1734.2	1734.4	1		III
			SGMR										1803.8	1804.2	1		III
	2051	2400	CULG				2051	2310.5	1	2051	2359	1					IS
	2052	2245	HARV														
			CULG							2100	2251.5	1					IIIS
	1200	2400	BOUL										2112.4	2225	2		CONT
	2145	2400	MANI														
13	0000	1017	MANI														
	0000	0200	BOUL														
	0000	0641	CULG							0012	0617.5						IIIGN,W
	0502	1835	DURN							0502 E	1200	1					I,DC
			CULG				0515	0641		0018.5	0641						IS,W
	0451	1330	WEIS							0541.0	1134.0	2					IN
			CULG							0639	0641	1					IIIGG
	0952	2344	SGMR														
			DURN							1011.8	1011.9	2					IIIG
	1200	2400	BOUL														
	1248	2245	HARV														
	1455	1817	WEIS														
	2057	2400	CULG							2123	2322						IIIG,N,W
	2145	2400	MANI														
14	0000	1017	MANI														
	0000	0200	BOUL														
	0000	0720	CULG							0002	0650						IIIG,N,W
			CULG				0112.5	0319	1	0144.5	0339	1					IS
			CULG				0325	0326	1	0325	0326	1					IIIG
			CULG							0622.5	0623.5	1					IIIB,U
			CULG							0639.5	0640.5	2					IIIG,U
	0445	1814	WEIS							0639.8	0640.1	2					IIIB
			WEIS							0952.3	0933.0	3					IIIG
			WEIS							0956.2	0956.5	1					IIIG
	1200	2400	BOUL														
	0502	1835	DURN							1201.3	1201.6	1					IIIG
			WEIS							1201.3	1202.4	2					IIIGG
	0953	2342	SGMR										1201.5	1202.3	1		III
	1245	2245	HARV														
			WEIS							1506.9	1507.2	1					IIIG
			WEIS							1509.2	1509.5	2					IIIG
			DURN							1509.2	1509.2	1					III
			WEIS							1622.7	1622.8	1					IIIB
	2057	2400	CULG							2112.5	2400						IIIS,W
	2146	2400	MANI														
15	0000	0200	BOUL														

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AUG 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
15	0000	0640	CULG							0000	0640	1					IIIS
	0000	1017	MANI										0027.4	0027.6	1		III
			CULG							0611	0614	1					IIIG
			CULG				0614.5	0615.5	1	0614.5	0616.5	2					IIIGG,U
	0447	0807	WEIS							0614.7	0615.0	1					IIIG
	0502	1835	DURN							0614.7	0615.1	1					IIIG
			DURN							0729.4	0729.9	1					IIIG
	0820	1810	WEIS														
	1200	2400	BOUL														
	1244	2246	HARV														
	0954	2341	SGMR										2030.2	2030.5	1		III
	2057	2400	CULG							2109	2234	1					IIIN
			CULG				2129.5	2353.5	1								I
	2146	2400	MANI														
16	0000	1017	MANI														
	0000	0200	BOUL														
			CULG				0001.5	0158	1								I
	0000	0643	CULG							0001.5	0617.5						IIIG,N,W
	0447	1451	WEIS														
	0502	1649	DURN														
			CULG				0534		1	0534		1					IIIB
	0955	2348	SGMR														
	1245	2246	HARV														
	1520	1810	WEIS														
	1707	1824	DURN														
	2055	2400	CULG							2055	2400	1					IIIN
	1200	2400	BOUL										2056	2200	1		CONT
	2146	2400	MANI														
			CULG				2202.5	2203.5	1	2202.5	2203.5	1					IIIG
17	0000	1017	MANI														
	0000	0640	CULG							0005.5	0141						IIIS,W
	0000	0200	BOUL							0106.7	0107.1	1	0106.7	0107.1	1		III
			CULG							0144.5	0333.5	2					IIIS
			CULG							0156	0326.5	1					IS
			CULG							0346	0608						IIIN,W
	0450	1820	WEIS														
	0503	1824	DURN														
	0957	2338	SGMR														
	1200	2400	BOUL														
	1245	2245	HARV														
	2055	2400	CULG							2114	2230	1					IIIN
	2146	2400	MANI														
18	0000	1017	MANI														
	0000	0200	BOUL														
	0000	0642	CULG							0156.5	0600						IIIN,W
	0451	0750	WEIS														
			CULG				0544.5	0642									IW
	0502	1822	DURN							0545	0605	1					I,DC
	1245	2245	HARV							1450	1657	1					IW
	0957	2337	SGMR										1556.8	1557.2	1		III
			SGMR										1611.9	1612.2	1		III
	2044	2400	CULG				2256	2258.5	1	2255.5	2259.5	2					IIIGG,V,U
	2146	2400	MANI										2256.5	2257.6	3		III
	1200	2400	BOUL							2256.5	2258.4	3	2256.5	2258.4	3		IIIG
			SGMR										2256.7	2258.0	2		III
			CULG							2313	2314	2					IIIG,V,U
			BOUL							2313.1	2313.4	2					III
			CULG							2315	2400						IW
			CULG							2357.5	2358	2					IIIG,U
			BOUL							2357.8	2357.9	1					III
19	0000	0200	BOUL														
	0000	1017	MANI														
	0000	0726	CULG							0000	0031						IW
			CULG							0014	0015	1					IIIG
			CULG							0130	0521	1					IIIGN
			CULG							0301.5	0302.5	1					IIIG,U
			CULG							0315	0317.5	2					IIIGG,U
	0501	1828	DURN							0800	0820	1					I
	0642	1802	WEIS							1206.5	1206.7	1					IIIB
	0958	2335	SGMR										1206.8	1207.1	1		III
	1245	2246	HARV							1353	1414	1					I
			HARV							1416	1418	2					IIIGG
			WEIS							1416.6	1417.9	2					IIIGG
	1200	2400	BOUL							1416.6	1418.0	2	1416.6	1418.0	2		IIIG
			HARV							2018	2020	1					IIIG
	2057	2400	CULG							2057	2400	1					IIIN
	2146	2400	MANI														
			BOUL										2235.8	2236.2	1		III
			BOUL										2243.6	2244.1	1		III
20	0000	0636	CULG							0001.5	0540.5						IIIN,W
			CULG							0112	0114	1					IIIG,U
			CULG							0117	0119.5	1					IIIG,U
			CULG				0124	0127		0123.5	0128	2	0124.5	0127	1		IIIGG,V,U
	0000	0200	BOUL							0124.1	0129.9	3	0124.1	0129.9	3		III
	0000	1017	MANI										0124.2	0127.8	3		IIIG

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AUG 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
20			CULG							0343		1				IIIB
	0454	1335	WEIS													
	0502	1432	DURN													
			CULG							0602.5		2				IIIB,U
	1345	1758	WEIS													
	1300	2246	HARV							1733	1735	2	1733	1735	2	UNCLF
	0959	2334	SGMR										1733.5	1735.1	2	IIIG
			BOUL										1733.5	1733.9	1	III
			HARV							1833	1835	1	1833	1835	1	UNCLF
			BOUL										1833.0	1836.5	1	III
			SGMR										1833.5	1835.1	2	IIIG
	2146	2400	MANI													
	2058	2400	CULG				2150	2225.5	1	2130	2400	1				IS
			CULG							2242.5	2315	1				IIIN
21	0000	0642	CULG							0000	0025.5					IN
	0000	1017	MANI													
	0000	0200	BOUL													
			CULG							0007.5	0302					IIIN,W
	0456	1801	WEIS													
	1001	2332	SGMR													
	1120	1400	DURN							1120	1815	1				I,N
	1302	2245	HARV													
	1503	1815	DURN													
	2054	2400	CULG							2115	2335					IIIG,W
	2146	2400	MANI													
	1400	2400	BOUL							2258.6	2258.7	1	2258.6	2258.7	1	III
			BOUL							2313.2	2313.6	1	2313.2	2313.6	1	III
22	0000	0200	BOUL													
	0000	1017	MANI													
	0000	0643	CULG							0338		1				IIIB
	0459	0755	WEIS													
	0502	1815	DURN							0502	1835	1				I,N
	0803	0850	WEIS													
			DURN							1015.6	1015.7	1				III
	1245	1730	WEIS													
	1200	2400	BOUL							1551.2	1555.0	1	1551.2	1555.0	1	IIIG
	1001	2330	SGMR										1700.0	1700.3	1	III
	1301	2250	HARV							1849	1850	2				U
			BOUL							1849.8	1849.9	1				III
	2057	2400	CULG							2142	2324.5	1				IIIN
	2146	2400	MANI													
23	0000	0200	BOUL													
	0000	0735	CULG							0011.5	0015					IIIG,W
			CULG							0016	0227	1				I
			CULG							0027	0730	1				IIIN
			CULG							0223	0226	1				IIIGG
			CULG							0424.5	0427.5	2				IIIG
	0000	1015	MANI										0425.0	0425.3	2	III
	0502	1756	DURN													
	0512	1352	WEIS													
	1002	2329	SGMR													
	1301	2246	HARV													
	1356	1750	WEIS													
	2035	2400	CULG							2052		1				IIIB
	1200	2400	BOUL							2052.1	2052.9	1	2052.1	2052.9	1	III
	2146	2400	MANI													
			CULG							2231		1				IIIE,U
24	0000	1013	MANI													
	0000	0200	BOUL													
	0000	0535	CULG							0144	0407	1				IIIGN
			CULG							0215	0215.5	1				IIIG
	0544	0735	CULG							0616.5	0617	1				IIIB,U
	0500	1508	WEIS							0616.5	0616.6	1				IIIB
	1230	2400	BOUL							1352.9	1353.5	2	1352.9	1353.5	2	IIIG
	1003	2327	SGMR										1353.1	1355.2	2	IIIG
			WEIS							1453.1	1453.5	3				IIIB
			WEIS							1455.2	1455.3	1				IIIB
	1515	1752	WEIS													
	1302	2246	HARV							1517	1518	1	1517	1518	1	IIIG
			SGMR										1517.3	1517.6	1	III
			BOUL							1517.4	1519.6	2	1517.4	1519.6	2	IIIG
	2035	2400	CULG													
	2146	2400	MANI													
25	0000	1013	MANI													
	0000	0200	BOUL													
	0000	0734	CULG							0209.5	0210	1				IIIB,U
			CULG							0253	0253.5					IIIB,U,W
	0503	0815	WEIS													
	1004	2326	SGMR													
	1301	2246	HARV													
	1230	1735	BOUL							1307.1	1307.2	1				III
	0629	1754	WEIS							1407.3	1407.4	1				IIIB
	2034	2400	CULG													
	2146	2400	MANI													
26	0000	1012	MANI													

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SPECTRAL OBSERVATIONS

AUGUST 1974

AUG 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
26	0004	0200	BOUL														
	0000	0734	CULG							0710	0711						IIIG,W
	1005	2324	SGMR														
	1017	1807	DURN														
	1230	2400	BOUL														
	0505	1530	WEIS							1438.9	1439.0	1					IIIB
	1449	2245	HARV														
	1626	1745	WEIS														
	2146	2400	MANI														
	2034	2305	CULG				2227	2228	1	2227	2227.5	1					FASTDRIFT
			CULG							2254.5	2255	1					IIIB
	2315	2400	CULG														
27	0000	1011	MANI														
	0000	0200	BOUL														
	0000	0734	CULG							0026	0027	2					IIIG
			CULG							0154	0154.5						IIIG,W
			CULG				0255	0256	1	0255	0256	1					IIIG
			CULG				0340	0341	1	0340	0341	1					IIIG
	0510	1805	DURN														
	0507	1739	WEIS							0638.0	0638.2	1					IIIB
	1006	2322	SGMR														
	1230	2400	BOUL														
	1301	2246	HARV														
	2034	2400	CULG														
	2146	2400	MANI														
28	0000	1011	MANI														
	0000	0200	BOUL														
	0000	0733	CULG							0313	0314	1					IIIG,U
	0510	1000	WEIS														
	0511	0702	DURN														
			CULG							0635	0635.5	1					IIIB,U
	0714	1804	DURN														
	1008	2321	SGMR														
	1035	1742	WEIS														
	1230	2400	BOUL														
	1301	2246	HARV														
	2033	2400	CULG							2041							IIIB,W
	2146	2400	MANI														
			CULG							2344.5	2345	1					IIIG,U
29	0000	0158	CULG														
	0000	1010	MANI														
	0000	0200	BOUL														
	0213	0733	CULG							0627.5		1					IIIB,U
	1009	2319	SGMR														
	1302	2246	HARV							1536	1537	2					IIIG
	1230	2400	BOUL							1536.4	1537.2	2					III
	0521	1736	WEIS							1536.5	1537.3	2					IIIG
	0520	1803	DURN							1536.6	1536.8	1					IIIG
	2034	2400	CULG							2145.5		1					IIIB
	2146	2400	MANI														
			CULG							2317.5	2318	1					IIIG
30	0000	1010	MANI														
	0000	0130	BOUL														
	0000	0732	CULG							0019	0020	1					IIIG
	0513	0542	WEIS														
	0519	1803	DURN														
			CULG							0547.5	0548	2					IIIG,U
	1010	2317	SGMR														
	1139	1549	WEIS														
	1230	2400	BOUL														
	1301	2246	HARV														
	1553	1739	WEIS														
	2033	2400	CULG														
	2146	2400	MANI														
31	0000	1010	MANI														
	0000	0130	BOUL														
	0000	0732	CULG														
	0517	1433	WEIS														
	0520	1802	DURN														
	1011	2316	SGMR														
	1230	2400	BOUL														
	1302	2246	HARV														
	1542	1728	WEIS														
	2034	2400	CULG														
	2146	2400	MANI														

SELECTED SOLAR EVENTS

AUGUST 1974

Culgoora

UT Date 1974. AUGUST	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions: Central Dist. ($R_\odot$)	Positions: Position Angle (Deg.)	Polarization	Intensity (1-3)		
6	0443	0444	160	0.9	90	0	1	IIIGG	*
			80	1.0	90	0	1		
			43.25	1.1	90	-	1		
8	0204	0205	160	1.0	110	0	3	IIIB	*
			80	0.9	80	0	3		
9	0134	0139	160	0.6	130	0	3	IIIGG,	U*
			80	0.7	130	0	3		
			43.25	0.8	120	-	3		
20	0123	0127	160	0.7	70	0	3	IIIGG,	V,U
			80	1.0	110	0	3		
			43.25	1.6	110	-	3		
28	2344	2345	160	0.9	140	0	3	IIIG,	U
			80	1.0	140	0	2		

Days without Heliograph observations: Nil

* Other type III from same position during the day.

COSMIC RAY INDICES

(Neutron Monitors)

AUGUST 1974

AUG.	THULE	ALERT	DEEP RIVER	CALGARY	SULPHUR MT	KIEL	TOKYO
	Average cts/hr	Average cts/hr	Average cts/hr	Average cts/hr	Average cts/hr	Average cts/hr	Average cts/hr
1		7378.0	6882.3	11962.3	8779.7	6236.0	3561.3
2		7386.7	6893.8	11970.1	8803.9	6262.5	3569.2
3		7390.6	6856.0	11928.2	8780.6	6243.7	3560.5
4		7325.5(16)	6806.7	11814.0	8703.5	6194.0	3553.1
5		-- (0)	6793.0	11767.2	8666.8	6166.3	3541.7
6		-- (0)	6781.3	11710.6	8644.3	6140.2	3534.5
7		-- (0)	6736.9	11672.8	8592.7	6114.5	3529.3
8		-- (0)	6720.3	11627.1	8546.7	6108.4	3517.6
9		-- (0)	6680.5	11523.6	8475.1	6065.5	3501.4
10		-- (0)	6658.3	11484.1	8439.6	6052.0	3500.4
11		7126.2(5)	6685.6	11454.8	8482.2	6075.4	3507.8
12		7151.8	6679.2	11478.5	8442.2	6067.4	3512.7
13		7153.5	6678.0	11461.8	8363.3	6056.7	3520.5
14		7152.3	6686.9	11503.6	8398.2	6041.7	3517.9
15		7189.3	6708.6	11498.1	8423.3	6033.8	3522.3
16		7201.0	6714.1	11577.1	8486.5	6058.7	3514.7
17		7257.9	6740.3	11645.4	8524.5	6102.5	3503.1
18		7283.9	6777.3	11706.4	8592.9	6118.7	3525.5
19		7252.0	6769.0	11667.3	8604.5	6137.4	3530.1
20		7191.8	6720.4	11537.4	8528.2	6105.5	3504.9
21		7191.1	6697.6	11552.8	8512.4	6100.4	3504.8
22		7196.0	6695.8	11573.3	8495.5	6094.5	3496.5
23		7214.0	6715.8	11591.8	8531.4	6102.3	3498.3
24		7258.4	6764.9	11671.8	8589.9	6141.3	3504.6
25		7341.3	6827.9	11765.0	8670.3	6177.9	3504.1
26		7344.2	6838.8	11808.5	8675.2	6195.6	3504.6
27		7302.3	6808.6	11810.9	8730.3(3)	6183.3	3512.7
28		7303.2	6815.7	11790.9	8673.0	6179.8	3513.6
29		7315.9	6836.6	11782.0	8694.2	6194.6	3518.9
30		7294.5	6808.7	11733.4	8650.2	6172.8	3509.0
31		7270.0	6784.8	11693.0	8618.8	6155.2	3491.1
MEAN		7258.4	6760.2	11669.7	8584.5	6131.6	3518.9

Thule data not received in time for publication.

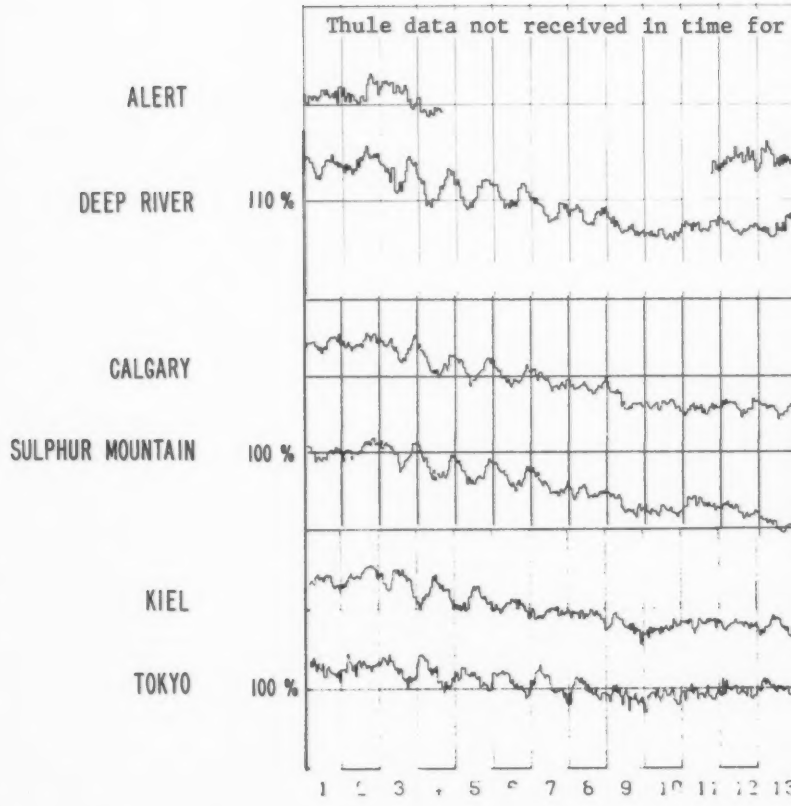
( ) Number of hours for which data are available if less than 24.

Thule, Alert, Calgary, Sulphur Mountain and Kiel Scaling Factors = 100.
Deep River Scaling Factor = 300.
Tokyo " " = 128.

See *Descriptive Text* for other characteristics.

COS

(Pressure

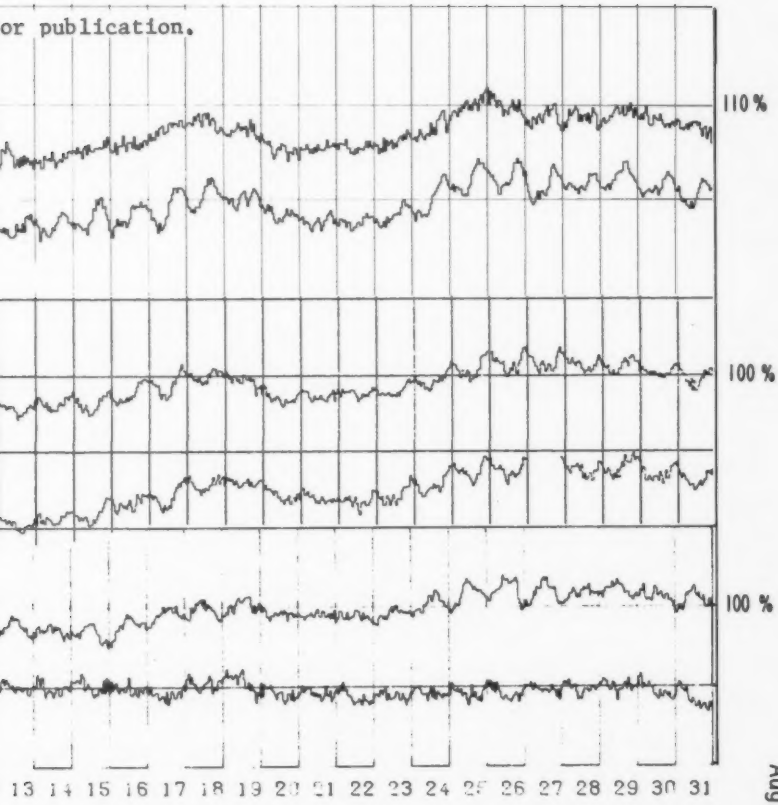


COSMIC RAY INDICES

re Corrected Hourly Totals)

AUGUST 1974

or publication.

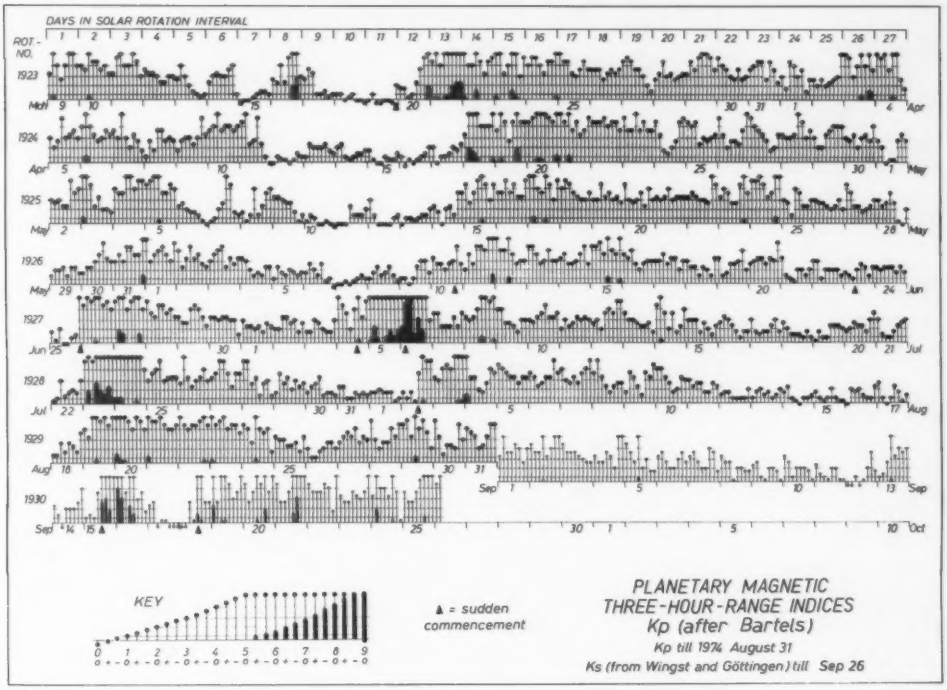


GEOMAGNETIC ACTIVITY INDICES

AUGUST 1974

Day	Three-Hour Range Indices Kp									Prel Ci	Cp	Ap	aa				
	1	2	3	4	5	6	7	8	Sum				N	S	M		
1QQ	2-	2-	2	2-	2-	2-	1-	1	12	0.2	0.2	6	16	11	13	14	CC
2	2-	1	2-	1-	4-	5+	5-	5-	23+	1.1	1.1	22	33	44	10	68	
3	3+	3	4	4+	4	5	5+	5+	34+	1.5	1.4	35	57	63	50	70	
4	6	3+	3+	2	2-	3-	4	4-	27-	1.2	1.1	24	38	33	45	26	
5	4+	4	4-	3+	3+	3-	3+	3+	28	1.1	1.1	21	37	43	42	38	
6	4-	3+	2+	3-	3+	3+	5-	4-	27	1.0	1.0	20	41	34	25	49	
7	4	3	3-	3+	3-	4-	4	5-	28	1.1	1.1	22	41	39	30	50	
8	4-	5-	3+	2+	2-	2+	3-	3-	23+	1.1	0.9	16	29	25	32	22	
9	2-	4-	3+	2+	1+	4-	3+	4+	24-	0.9	0.9	16	26	29	29	26	
10	4	4	3+	3-	2-	2	3+	3	24	0.8	0.9	16	35	24	36	24	
11Q	3	2+	3-	3-	2-	2-	3-	2+	19	0.4	0.6	10	25	19	26	18	
12QQ	1+	2-	2-	1	1	1	1	2	11-	0.1	0.2	5	12	9	11	10	CC
13QQ	1	2-	2	1+	2-	1	1+	2	12	0.3	0.2	6	12	11	12	11	CC
14QQ	2-	2+	1	1-	0+	1	1	1+	9+	0.1	0.2	5	13	11	13	12	CC
15QQ	2-	1	1-	1	2	1	1-	1-	9-	0.2	0.1	4	12	11	11	12	CC
16Q	0+	2	2-	2	1+	1	1	2+	12-	0.3	0.2	6	12	13	13	14	CC
17Q	3-	1	0+	1	2+	2-	1-	1+	11	0.2	0.3	6	12	13	10	15	K
18Q	1+	1+	3-	2-	3-	2+	2-	4-	17+	0.6	0.5	10	22	18	16	25	
19D	4	3+	5	5+	5-	5	4+	5	37-	1.4	1.4	40	46	63	50	58	
20D	6	5+	5+	5-	4	5	5-	4	39	1.5	1.5	46	64	48	63	50	
21D	6-	5-	5-	5	4+	4	4	4+	37-	1.4	1.4	39	46	69	70	45	
22D	5	4+	4	4+	4+	5-	5+	4+	36+	1.4	1.4	37	50	52	50	52	
23D	5+	4+	5-	5	4	4+	4+	4-	36-	1.5	1.4	36	47	64	63	48	
24	4+	4	3-	5+	4	4-	4	2-	30-	1.2	1.2	26	41	51	55	37	
25	3+	3	3	2+	2+	3-	2-	3+	22-	0.8	0.7	13	21	23	22	22	
26Q	2	1	1	2-	2	3-	3-	2	15	0.3	0.4	7	14	14	11	18	
27	3-	3+	4-	3+	4	3-	3+	3	26	1.0	1.0	18	26	25	26	26	
28	5-	3	2	3-	3-	4	3+	4+	27-	0.9	1.0	20	36	25	25	36	
29	4+	5-	3+	6-	4	5-	4-	2	32+	1.4	1.3	31	43	45	49	39	
30	5-	3+	1+	2+	2+	2	4+	3	23+	0.9	0.9	17	35	28	34	29	
31	4	4-	3+	2	2+	3+	4+	4+	27+	1.0	1.1	21	46	32	32	46	
									MEAN	0.87	0.86	19	31.9	32.0	32.0		

GEOMAGNETIC ACTIVITY INDICES



DAILY AVERAGE INDICES Ap

	1973				1974							
DAY	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	5	5	4	4	17	13	20	17	9	28	10	6
2	6	31	7	2	9	12	18	15	18	18	12	22
3	6	48	5	5	11	8	20	39	24	19	9	35
4	12	12	18	29	13	7	10	35	34	9	31	24
5	15	10	14	17	14	8	18	18	35	6	74	21
6	9	12	9	10	12	7	20	26	6	6	130	20
7	8	6	28	8	2	10	13	18	15	3	15	22
8	8	6	11	7	10	5	17	13	13	6	36	16
9	44	10	12	21	7	4	33	16	11	7	15	16
10	27	21	8	8	14	14	30	28	3	15	20	16
11	12	11	6	8	6	30	32	19	5	32	14	10
12	7	15	4	4	5	40	15	3	5	29	23	5
13	8	17	10	4	5	20	10	7	4	21	12	6
14	4	7	8	6	8	12	16	5	10	18	23	5
15	12	6	8	8	15	4	3	4	30	37	10	4
16	14	30	10	4	15	7	42	4	26	16	10	6
17	10	27	17	6	16	11	9	6	38	15	8	6
18	7	22	19	3	24	1	3	48	24	10	6	10
19	3	20	4	13	9	4	2	39	18	13	6	40
20	12	20	6	29	14	12	23	46	18	18	11	46
21	15	37	23	34	16	23	68	35	18	7	9	39
22	17	20	7	25	5	14	39	31	22	8	8	37
23	63	6	8	18	4	44	42	29	25	7	82	36
24	28	7	26	4	4	29	34	19	39	8	51	26
25	27	5	42	3	50	34	28	20	14	10	22	13
26	25	3	18	4	38	28	20	21	11	40	20	7
27	8	4	14	6	34	26	22	19	14	54	24	18
28	4	20	6	11	18	27	18	23	10	26	18	20
29	4	86	5	19	22		34	19	7	19	13	31
30	4	28	4	15	21		20	16	17	15	8	17
31		19		17	19		24		30		6	21
MEAN	14	18	12	11	15	16	23	21	18	17	24	19

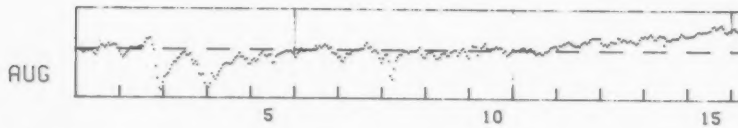
HOURLY EQUATORIAL D

AUGU

NASA/GODDARD SPACE FLIGHT CENTER

(Time-UT)

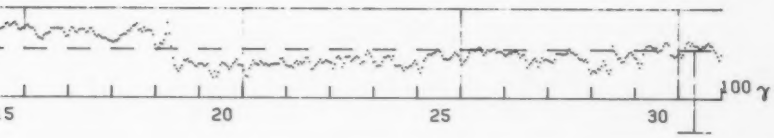
DAY	1	2	3	4	5	6	7	8	9	10	11
1	-1	-2	-3	-5	-4	-2	-3	-2	-3	-6	-8
2	-8	-11	-8	-5	-3	1	1	0	1	1	2
3	-34	-32	-30	-25	-20	-16	-16	-12	-11	-7	-5
4	-47	-42	-30	-34	-37	-32	-28	-24	-20	-18	-17
5	-14	-12	-15	-13	-7	-5	-2	-8	-9	-7	-7
6	-10	-5	-3	1	-2	-2	-1	-1	-2	-1	0
7	-9	-14	-15	-10	-5	-6	-5	-2	-1	-1	0
8	-11	-6	-6	-14	-32	-36	-23	-13	-9	-6	-6
9	-5	-3	-3	-2	-7	-11	-11	-9	-5	-4	-4
10	-1	5	4	4	-6	-1	3	5	8	2	1
11	0	-1	0	0	2	3	2	-2	1	2	-1
12	2	6	6	8	8	10	11	9	7	6	5
13	10	7	8	6	8	11	11	10	10	16	15
14	18	16	18	20	18	14	14	17	19	18	18
15	17	18	18	19	21	23	23	22	23	23	23
16	27	28	25	24	24	21	16	13	12	11	15
17	21	25	24	20	19	22	23	23	23	19	20
18	7	9	9	11	15	16	17	17	21	21	24
19	-2	1	6	5	10	17	31	18	2	-12	-21
20	-18	-19	-21	-21	-19	-27	-31	-35	-28	-34	-29
21	-26	-33	-34	-24	-20	-14	-18	-19	-20	-15	-17
22	-21	-22	-21	-23	-17	-15	-19	-16	-18	-16	-11
23	-17	-24	-18	-11	-9	-12	-22	-17	-10	-10	-9
24	-15	-21	-20	-20	-15	-10	-10	-8	-9	-13	-8
25	-24	-29	-22	-14	-11	-7	-6	-7	-5	-4	-2
26	-19	-15	-13	-9	-4	0	0	-2	0	2	2
27	-8	-6	-4	-5	-2	-3	-2	-5	-10	-7	-6
28	-14	-15	-16	-12	-5	-5	-5	-6	-6	-5	-4
29	-26	-26	-28	-23	-24	-20	-13	-18	-25	-29	-24
30	-11	-16	-22	-16	-5	1	4	5	5	3	2
31	-5	-9	-6	3	8	10	5	8	5	4	4



L Dst VALUES (PROVISIONAL)

UGUST 1974

12	13	14	15	16	17	18	19	20	21	22	23	24
-3	1	4	3	1	3	6	3	4	5	4	0	-4
3	2	7	12	12	13	4	-2	-22	-36	-48	-50	-41
-4	-8	-8	-6	-14	-19	-16	-20	-31	-32	-31	-42	-46
-18	-19	-17	-14	-11	-9	-5	-10	-10	-13	-12	-18	-18
-17	-16	-9	-7	-6	-5	-4	-3	-2	-3	-2	-4	-6
4	1	4	2	4	6	4	1	2	-4	-5	-6	-10
0	1	1	5	8	2	3	-3	-1	-2	-4	-11	-16
-2	-2	-2	-4	-2	-2	-2	-2	0	3	-6	-9	-10
-7	-7	-3	-2	0	-1	-7	-3	0	2	-2	-7	-10
1	2	2	4	2	3	2	-3	-1	-7	-5	-3	0
-3	-5	-4	-3	-5	-5	-2	-2	0	3	4	5	5
6	5	8	10	11	9	11	14	15	15	15	15	15
12	14	13	11	12	13	11	10	8	10	14	17	16
16	13	13	13	15	15	15	15	18	21	19	17	17
24	25	29	30	27	28	30	31	28	23	22	24	24
17	18	19	24	24	24	24	24	23	24	19	14	15
24	24	20	16	14	16	14	12	12	12	10	9	8
27	28	30	22	23	20	25	21	22	22	21	16	4
-25	-28	-24	-21	-14	-15	-13	-16	-16	-18	-21	-22	-19
-20	-17	-18	-20	-22	-25	-22	-18	-16	-13	-20	-20	-21
-20	-18	-20	-21	-19	-19	-18	-18	-18	-12	-12	-16	-20
-11	-16	-25	-24	-21	-19	-16	-13	-17	-16	-14	-15	-16
-15	-13	-11	-9	-11	-18	-16	-15	-7	-2	-5	-9	-16
-20	-21	-20	-20	-23	-26	-22	-23	-21	-20	-17	-14	-18
-1	-3	-8	-12	-12	-13	-12	-10	-7	-4	-6	-8	-13
-3	-7	-4	-1	-2	-2	0	0	-4	-3	-3	-4	-6
-13	-22	-18	-16	-13	-11	-14	-21	-15	-10	-13	-12	-13
1	-3	-4	-6	-6	-10	-12	-12	-14	-12	-15	-24	-29
5	-2	-5	-11	-10	-15	-14	-9	-7	-4	-3	-6	-9
2	-3	-1	0	5	8	9	6	-6	-7	-9	-8	-6
2	1	4	3	6	8	5	4	0	-3	-8	-13	-6



PRINCIPAL MAGNETIC STORMS

AUGUST 1974

OBS. 2 letter IAGA code	GEOMAG-NETIC LATI-TUDE	COMMENCEMENT DAY	hr min (UT)	TYPE	SC - AMPLITUDES D(')	H(γ)	Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY(3 HOUR PERIOD)	K	RANGES D(')	H(γ)	Z(γ)	UT END DAY	HOUR
CO	64.6N	2	06--	..	..	..	..	02(6)	7	207	1560	930	04	08
NE	55.1N	2	1227	SC	2	1	--	02(6) 03(3,8) 04(1,3)	5	28	166	166	04	09
WI	54.2N	2	1227	SC*	- 2 *	+12	0	02(6) 03(6,7)	6	28	190	90	04	07
FR	49.6N	2	13--	..	..	..	..	03(8)	5	19	119	81	04	09
EB	43.9N	2	12--	..	..	..	..	02(6,7) 03(6,7,8)	5	15	78	86	04	09
IR	41.0N	2	1230	SC*	1.2	18	4	02(6)	6	22	126	39	04	12
TU	40.4N	2	1227	SC	- 1	+ 9	--	03(6,8) 04(1) 05(1) 06(2) 08(2) 10(2)	5	18	105	45	10	12
HY	7.6N	2	1225	SC	- 0.3	+ 7	- 1	02(6) 03(6)	5	9	58	38	04	09
GU	4.0N	2	1227	..	..	..	..	02(06)	5	10	70	20	04	12
GU	4.0N	2	1704	SI	--	--	--							
HU	0.6S	2	1227	..	..	..	..	02(6)	6	9	214	33	04	03
PM	18.7S	2	1227	SC	--	+ 8	+ 6	02(6) 05(5)	5	6	90	50	10	06
HR	33.7S	2	12--	..	..	..	..	2(7) 3(6,7) 4(1)	5	24	94	100	04	12
GN	43.2S	2	12--	..	..	..	..	02(6) 03(6)	6	26	78	120	05	15
TO	46.7S	2	12--	..	..	..	..	2(6,7,8) 3(3,4,6) 4(1)	5	21	150	50	04	08
KG	56.5S	2	1706	SC	--	--	--	03(6,7,8) 04(1)	6	--	--	--	04	12
NE	55.1N	4	16--	..	..	..	..	05(1,3) 06(2)	5	33	117	121	06	08
HU	0.6S	7	0003	..	..	..	..	07(6)	5	5	201	31	09	24
NE	55.1N	9	00--	..	..	..	..	09(2) 10(2)	5	23	117	58	10	09
CO	64.6N	18	22--	..	..	..	..	23(4)	8	229	2290	1160	24	21
SI	60.0N	18	22--	..	..	..	..	20(3)	7	90	580	680	24	20
NE	55.1N	18	21--	..	..	..	..	20(2,3,4) 22(1)	6	51	171	294	22	20
WI	54.2N	18	23--	..	..	..	..	20(1,6) 22(6,7)	6	37	260	100	24	20
FR	49.6N	18	21--	..	..	..	..	20(3)	6	32	141	81	25	11
EB	43.9N	18	22--	..	..	..	..	19(7) 20(1,3,6,7) 22(7) 23(1,7) 24(4)	5	17	123	86	24	21
TU	40.4N	18	22--	..	..	..	..	20(3) 22(1)	6	22	125	45	25	13
HU	0.6S	18	2320	..	..	..	..	19(6)	5	9	238	49	24	05
AP	16.0S	18	07--	..	..	..	..	21(1)	5	4	154	37	22	14
HR	33.7S	18	23--	..	..	..	..	20(1) 22(7) 23(1)	5	22	109	68	24	20
GN	43.2S	18	23--	..	..	..	..	19(5) 23(4) 24(4)	6	20	120	100	24	21
TO	46.7S	18	22--	..	..	..	..	19(3,5,6) 20(4)	5	23	120	50	20	18
KG	56.5S	18	23--	..	..	..	..	19(5,7)	5	--	--	--	20	03
BD	44.9N	19	08--	..	..	..	..	22(1)	6	45	120	90	25	19
IR	41.0N	19	05--	..	..	..	..	19(3,5)	6	27	142	57	21	05
AL	9.5N	19	04--		..	..	..	19(3,4)20(6)	5	5	156	47	20	18
HY	7.6N	19	0612	SC	- 0.3	+16	- 2	20(4)	5	5	165	22	20	18
GU	4.0N	19	0016	..	..	..	..	19(03)	5	10	140	30	25	14
AN	1.5N	19	04--		..	..	..	-		4	180	59	20	18
TV	1.1S	19	04--		..	..	..	-		3	205	126	20	18
PM	18.7S	19	06--	..	..	..	..	19(3,5) 20(4) 21(1,4) 23(1,4) 24(4)	5	9	140	50	25	18
IR	41.0N	21	06--	..	..	..	..	23(4)	6	22	124	41	24	17
HY	7.6N	21	0000	..	..	..	..	23(4)	5	6	75	37	23	20
TO	46.7S	21	00--	..	..	..	..	21(1,3,4) 22(4) 23(1,4) 24(4)	5	23	160	40	24	21
NE	55.1N	22	2033	SC	2	1	--	23(2,3,4) 24(1,2,4)	5	40	117	211	24	21
HY	7.6N	24	0816	SC	- 0.1	+ 6	- 1	24(4,5)	4	3	69	14	24	21
NE	55.1N	27	03--	..	..	..	..	27(3)	5	25	94	141	28	06
CO	64.6N	28	00--	..	..	..	..	29(4)	8	238	2220	960	29	20
NE	55.1N	28	23--	..	..	..	..	29(2,4)	6	59	233	351	30	04
WI	54.2N	28	11--	..	..	..	..	28(1,8) 29(1,4,6) 30(1)	5	22	140	60	30	06
EB	43.9N	28	16--	..	..	..	..	28(8)	5	10	74	37	30	04
IR	41.0N	28	08--	..	..	..	..	29(4)	7	33	108	50	29	21
TU	40.4N	28	21--	..	..	..	..	29(4)	6	22	105	45	30	08
TO	46.7S	28	21--	..	..	..	..	29(4)	6	20	140	40	30	07
BD	48.9N	29	03--	..	..	..	..	29(4)	6	39	95	90	30	06
GU	4.0N	29	1009	..	..	..	..	29(04)	6	10	100	20	30	14
HU	0.6S	29	0300	..	..	..	..	29(5)	5	5	204	30	29	21
PM	18.7S	29	10--	..	..	..	..	29(4)	6	5	90	70	30	15
NE	55.1N	31	0057	SC	3	31	6	01(2)	6	35	90	102	01	19
EB	43.9N	31	17--	..	..	..	..	31(7,8) 02(1,7,8)	5	10	86	43	03	04

Reports were received from the following observatories:

College Witteveen Ebro San Juan Guam Huancayo Apia Hermanus Toolangi
Sitka Fredericksburg Irkutsk Alibag Annamalainagar Trivandrum Port Moresby Gnangara Port-aux-Francais
Newport Boulder Tucson Hyderabad

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

AUGUST 1974

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romana)

The meaning of the station symbols is given in the IAGA-Bulletins nr. 12 and 32. Times of ssc and si are mean values. If given by ten or more stations they are underlined.

Sudden commencements followed by a magnetic storm or a period of storminess (ssc)

02 1227: B: SO WN DB LG IK CI TL QU LM; C: WI NI DB VI KA

Sudden impulses found in the magnetograms (si)

02 1705: A: HU; B: WN WI IK CI TL KA QU (ssc: B: LM KG)

15 1432: A: SO KS QU: B: WN WI IK EB TL HU LM (bs: A: NU - sfe: NI)

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

15 1258 - 1307 LG

15 1510 - 1526 LG

16 1027 - 1052 TL

17 1435 - 1447 LG

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

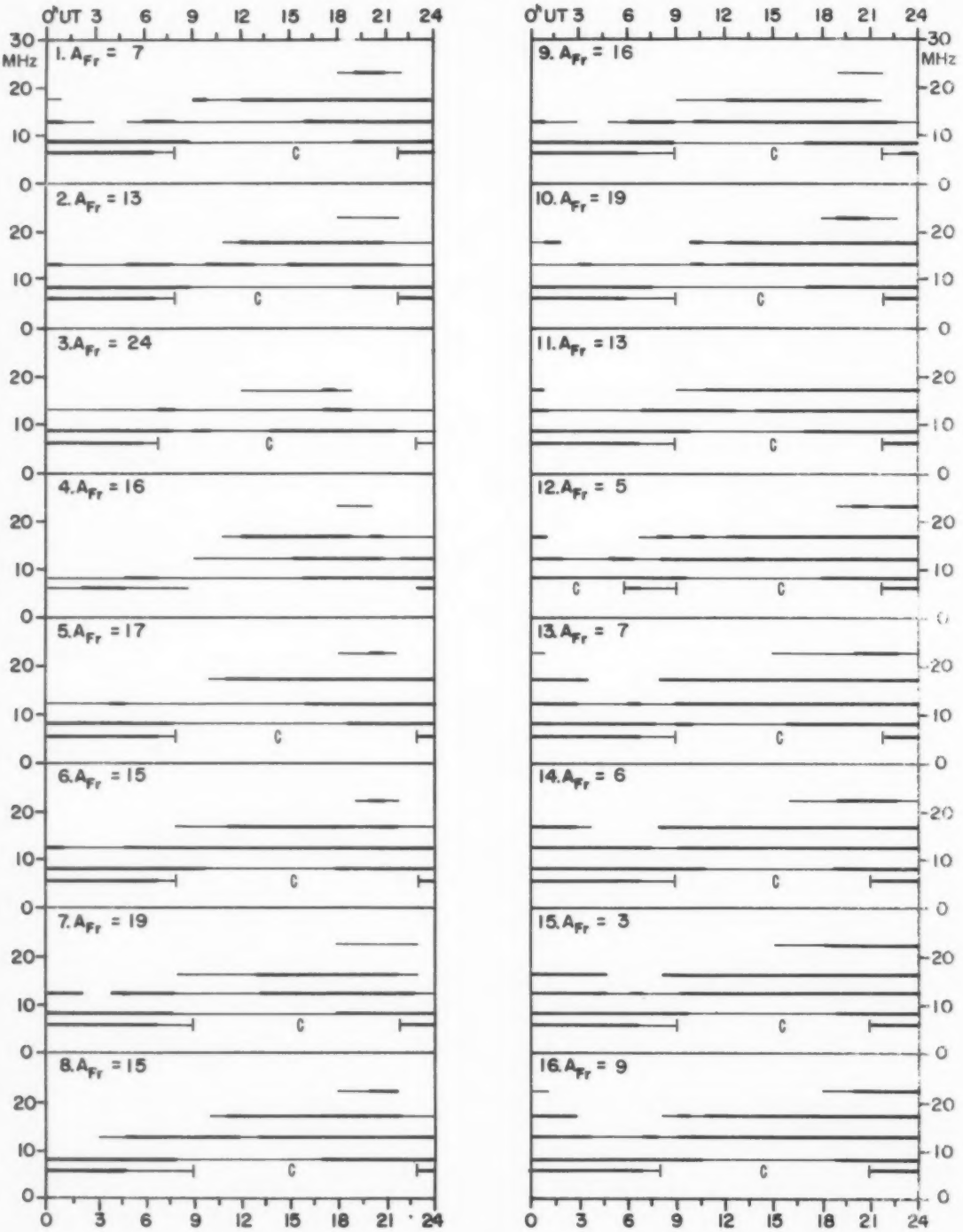
AUGUST 1974

North Atlantic

AUG 1974	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC								GEOMAGNETIC INDICES		
			6-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF				K_{FR}		A_{FR}
			00 TO 06	06 TO 12	12 TO 18	18 TO 24	02	08	14	20	HALF DAY (1)	HALF DAY (2)	OBSERVED
01	6-	6	6o	5+	6-	6o	6	5	6	6	3	1	7
02	6-	5	6o	5+	7-	6-	6	5	6	6	2	(4)	13
03	5+	5	5o	6-	5o	5o	5	5	6	5	3	(4)	24
04	5+	5	5o	4+	6-	6-	5	4	6	6	3	3	16
05	6-	5	6o	5-	6+	6o	6	6	5	6	(4)	3	17
06	6o	6	6o	6-	7-	6o	6	5	5	6	3	3	15
07	6-	6	6-	6-	6-	6-	6	6	6	6	(4)	3	19
08	6-	5	6-	5+	6+	5+	5	5	6	6	3	3	15
09	6o	5	6-	6-	7-	6o	5	6	6	5	2	3	16
10	6o	5	5o	6+	6o	6o	5	4	6	5	(4)	3	19
11	6+	6	6-	6+	6+	6+	5	5	6	6	3	2	13
12	6o	6	6o	7-	6o	6-	6	5	6	6	2	1	5
13	6o	6	6-	6+	6o	6+	6	6	7	7	2	2	7
14	6o	6	6+	6o	6-	6+	6	6	6	7	2	1	6
15	6o	6	7-	6-	6o	6+	6	6	6	6	1	1	3
16	6+	6	7-	6+	6o	6+	6	6	6	7	3	1	9
17	6+	6	6+	6+	6o	6o	7	6	6	6	2	2	5
18	6+	5	7-	7-	6-	6-	7	6	6	6	2	2	7
19	5+	4	6-	5-	5+	6-	6	6	6	5	(4)	(4)	29
20	5-	4	5-	4+	5o	5o	4	4	4	5	(5)	(4)	41
21	5o	4	5o	4o	6-	6-	4	4	5	5	(5)	(4)	33
22	5-	5	5o	4o	5o	4+	4	4	4	5	(5)	(4)	33
23	5-	6	4o	5o	5-	5+	4	5	4	5	(4)	(4)	31
24	5+	6	5o	5+	6-	6-	4	4	4	5	(4)	3	21
25	6-	6	6o	5+	6-	6-	5	5	5	5	3	2	13
26	6o	6	6-	6-	6o	7-	7	6	6	6	2	2	7
27	6-	6	6-	4+	6-	7-	6	6	6	6	(4)	3	17
28	6o	6	6-	5+	6+	7-	5	5	5	6	3	3	14
29	5o	6	6-	4o	5o	5+	6	5	5	5	(4)	3	24
30	6-	5	5-	4o	7-	6+	5	5	5	6	3	2	12
31	6-	5	6-	5-	6+	6+	5	5	5	6	3	3	18

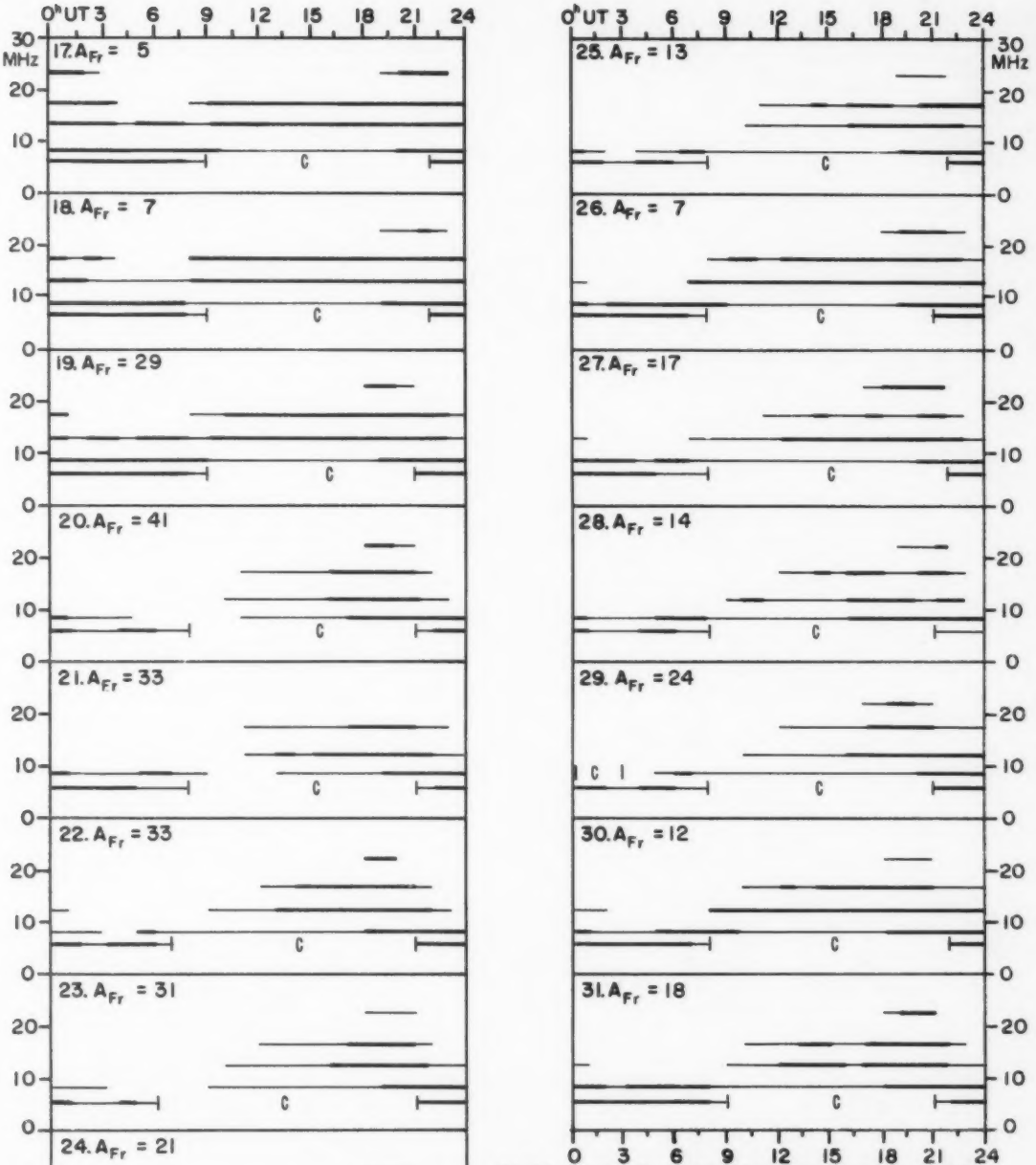
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

AUGUST 1974



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

AUGUST 1974



Field strengths from five frequencies, 6.425, 8.542, 12.813, 17.084 and 22.378 MHz, observed on a Lüchow.- Halifax circuit are represented above. Heavy solid lines represent field strengths ≥-12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represented by the fine line. Adapted from Observations by Deutsche Bundespost

RADIO PROPAGATION QUALITY INDICES

AUGUST 1974

Quality Indices calculated for reception at Lüchow

	TOKYO	HALIFAX	MAURITIUS	CANBERRA
1	6.2	7.4	5.7	5.1
2	6.2	6.5	5.7	4.0
3	3.9	4.3	4.8	4.1
4	3.8	5.4	4.8	4.2
5	5.3	6.9	5.6	4.7
6	6.0	7.4	6.4	4.6
7	5.2	5.8	6.2	4.8
8	5.1	7.2	5.7	4.3
9	6.3	6.6	6.7	5.1
10	6.0	7.7	6.5	4.2
11	8.4	8.2	6.4	5.5
12	7.6	8.7	6.4	5.2
13	7.8	9.2	6.8	4.8
14	7.2	9.2	6.5	4.6
15	6.5	10.0	7.1	4.3
16	7.2	9.1	6.2	4.7
17	6.9	9.4	5.9	4.5
18	5.6	9.9	6.0	5.1
19	5.0	6.2	5.8	5.0
20	5.1	4.1	6.1	5.0
21	4.6	4.4	6.9	4.8
22	5.5	4.2	7.1	3.8
23	5.6	4.2	6.5	4.1
24	4.4	5.1	6.5	4.4
25	5.8	5.4	7.2	3.9
26	5.9	7.4	6.9	3.4
27	4.9	4.7	7.2	4.4
28	5.2	5.0	5.1	4.6
29	4.4	4.2	5.6	4.5
30	5.5	6.6	6.0	4.2
31	4.5	6.1	6.1	5.3

The method of calculation of the radio propagation indices has been changed. An absolute quality figure is calculated for a 24-hour period from Tokyo, Halifax, Mauritius (Africa) and Canberra. The figure 0.0 corresponds to a median field strength of -30 dB above 1μV/m (converted into 1 kW and referred to an omnidirectional antenna). The figures 1 to 10 are in steps of 5 dB with the figure 10.0 corresponding to a median field strength of +20 dB above 1μV/m. The field strength of the frequency with the highest value for each hour is used in place of a mean of all recorded frequencies. This is done on the assumption that the optimum frequency would be used for communication.

USCOM-NOAA-ASHEVILLE-10-30-74-1000

AMERICAN REVOLUTION BICENTENNIAL
1776-1976